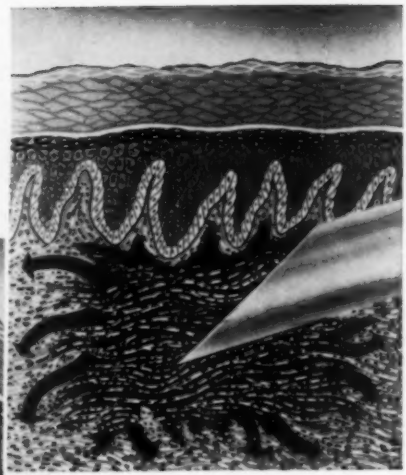
THE JOURNAL OF GENERAL PRACTICE

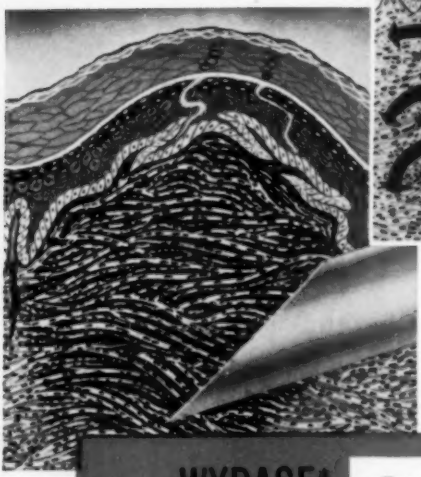
Medical TIMES

VOL. 79 JUNE 1951 NO. 6

HYPODERMOCLYSIS

with WYDASE





without WYDASE

WYDASE* Lyophilized Hyaluronidase

Wyeth

Highly Purified

For speedy absorption of fluids in hypodermocylsis. Prevents pain from stretching of tissue—nontoxic and apparently nonallergenic.

For More Complete and Widespread Local Anesthesia—fewer injections of local anesthetics required.

WYDASE in dry form is stable indefinitely; keeps in sterile solution for 2 weeks—refrigeration unnecessary.

SUPPLIED: Vials of 150 and 500 turbidity reducing (TR) units.

*Trade Mark

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functional **in a new way...**

Full-footed ACE Elastic Hosiery fulfills its essential function of supporting leg structures in a new, extremely effective manner. Its positive terminal anchorage at the toe enables the hosiery to be drawn on the leg under *vertical* as well as *circumferential* tension, producing a type of lift that can best be described as *"suspension support"*.

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Full-footed ACE Elastic Hosiery is not only sheer and form-fitted, but it *requires no overhose!* Thus it eliminates the unattractive bulk, the uncomfortable weight, and the unsightly wrinkles that have made women rebel against wearing elastic stockings.

full-footed

ACE® *Elastic Hosiery*

ACCEPTED COUNCIL ON PHYSICAL MEDICINE AND REHABILITATION AMERICAN MEDICAL ASSOCIATION

fashioned by the makers of ACE® Elastic Bandages

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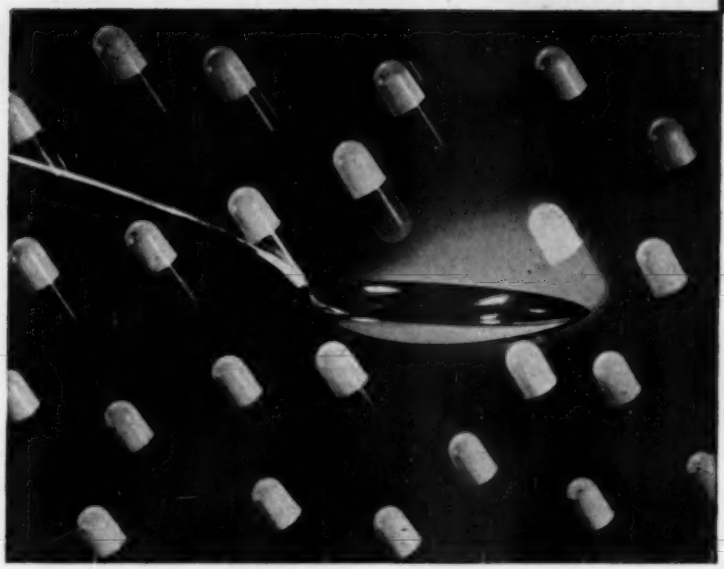

Lipotropic Therapy can be Adequate...with WYCHOL

WYCHOL Syrup provides a potent combination of lipotropic factors—choline and inositol. It is so palatable, patients will gladly adhere to the prescribed dosage schedule—and thus secure the full benefits of therapy.

And Now, a Practical Way to Maintain Day-Long Therapy

Prescribe the new, convenient **WYCHOL CAPSULES** to assure continued therapy while the patient is away from home.

For impaired fat metabolism and cirrhosis of the liver—intensive, sustained lipotropic therapy is recommended and facilitated by the combination Syrup and Capsule regimen.

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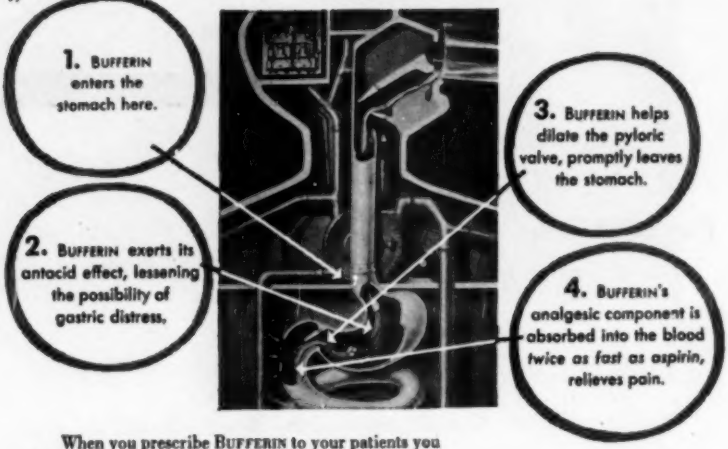
Medical Times is published monthly by Romaine Pierson Publishers, Inc., with publication offices at 34 North Crystal Street, East Stroudsburg, Pa. Executive, advertising and editorial offices at 676 Northern Boulevard, Great Neck, L. I., N. Y. Acceptance under section 34.64, P.L. and R., authorized February 23, 1950 at East Stroudsburg, Pa.

Give faster pain relief with BUFFERIN

ACTS TWICE AS FAST AS ASPIRIN

WITHOUT GASTRIC DISTRESS!



When you prescribe BUFFERIN to your patients you assure *faster relief of pain.* Clinical studies[1] show that within ten minutes after BUFFERIN is ingested, blood salicylate levels are as great as those attained by aspirin in twice this time. That is why BUFFERIN *acts twice as fast as aspirin.*

BUFFERIN has *greater gastric tolerance.* BUFFERIN's antacid ingredients provide protection against the gastric distress so often seen with aspirin.[1] BUFFERIN, therefore, is especially suited for use when prolonged use of salicylates is indicated.

1. *Effect of Buffering Agents on Absorption of Acetylsalicylic Acid* J. Am. Pharm. A., Sc. Ed. 39:21, Jan. 1950.

In vials of 12 and 36 and bottles of 100. Scored for divided dosage. Each BUFFERIN tablet contains 5 grains of acetylsalicylic acid with optimal proportions of magnesium carbonate and aluminum glycinate.

BUFFERIN
is a trade-mark of the Bristol-Myers Company

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CONTENTS

for keeping cardiacs edema-free

Effective and well tolerated, Tablets MERCUHYDRIN with Ascorbic Acid are unexcelled for diuretic maintenance therapy.

Continuous administration of one or two Tablets MERCUHYDRIN with Ascorbic Acid daily—plus an occasional injection of MERCUHYDRIN Sodium—keep the average cardiac free of edema.

Because "maximum absorption occurs relatively high in the gastrointestinal tract (stomach and duodenum)"* Tablets MERCUHYDRIN with Ascorbic Acid are simple sugar-coated. Unlike poorly tolerated oral mercurials—which require enteric coating—clinical experience has shown that these sugar-coated tablets produce dependable diuresis with minimal side effects.

tablets

MERCUHYDRIN®

(brand of meralluride)

with ascorbic acid

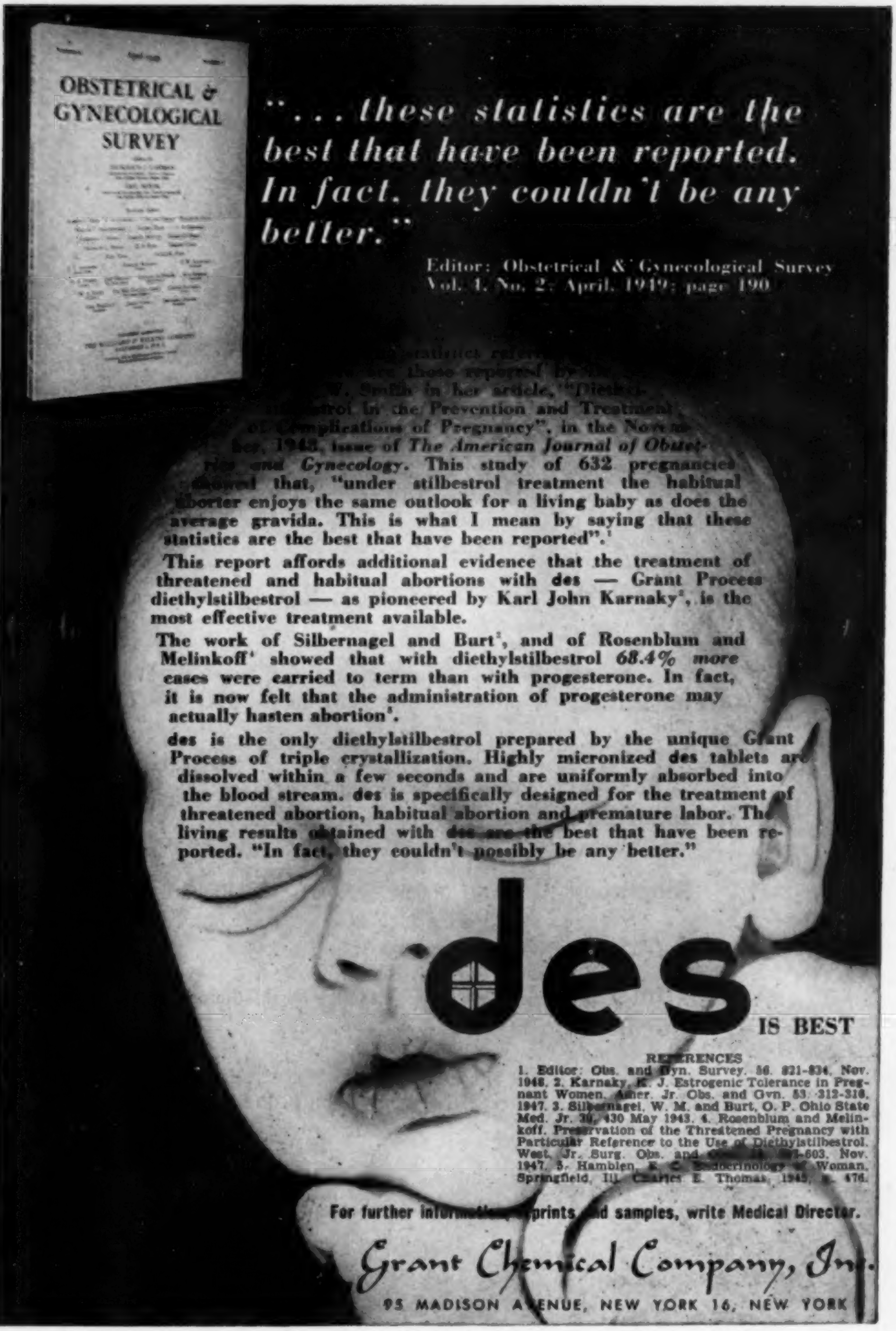
the simplest method of outpatient maintenance

To secure the greatest efficacy and *all* the advantages of Tablets MERCUHYDRIN with Ascorbic Acid, a three-week initial supply should be prescribed . . . 25 to 50 tablets. Available in bottles of 100 simple sugar-coated tablets each containing meralluride 60 mg. (equivalent to 19.5 mg. of mercury) and ascorbic acid 100 mg.

*Overman, W. J.; Gordon, W. H., and Burch, G. E.: Tracer Studies of the Urinary Excretion of Radioactive Mercury following Administration of a Mercurial Diuretic, Circulation *1*:498, 1950.

Lakeside Laboratories, INC., MILWAUKEE 1, WISCONSIN

MEDICAL BOOK NEWS


OBSTETRICAL & GYNECOLOGICAL SURVEY
"... these statistics are the best that have been reported. In fact, they couldn't be any better."
Editor: Obstetrical & Gynecological Survey Vol. 4, No. 2; April, 1949; page 190
W. Smith in her article, "Diethyl-
in the Prevention and Treatment
of Complications of Pregnancy", in the
issue of The American Journal of Obstet-
Gynecology. This study of 632 pregnancies
that, "under stilbestrol treatment the habitual
aborter enjoys the same outlook for a living baby as does the average gravida. This is what I mean by saying that these statistics are the best that have been reported".[1]
This report affords additional evidence that the treatment of threatened and habitual abortions with des — Grant Process diethylstilbestrol — as pioneered by Karl John Karnaky[2], is the most effective treatment available.
The work of Silbernagel and Burt[3], and of Rosenblum and Melinkoff[4] showed that with diethylstilbestrol 68.4% more cases were carried to term than with progesterone. In fact, it is now felt that the administration of progesterone may actually hasten abortion[5].
des is the only diethylstilbestrol prepared by the unique Grant Process of triple crystallization. Highly micronized des tablets are dissolved within a few seconds and are uniformly absorbed into the blood stream. des is specifically designed for the treatment of threatened abortion, habitual abortion and premature labor. The living results obtained with des are the best that have been reported. "In fact, they couldn't possibly be any better."
des
IS BEST
REFERENCES
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Medical TIMES

THE JOURNAL OF GENERAL PRACTICE

Incorporating the Long Island Medical Journal and Western Medical Times

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in Obesity!

No one appreciates will-power more than the obese patient on a reducing diet. With all the high-caloric temptations that constantly beset obese people, supplemented will-power is really required to resist food.

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Composition: Each tablet contains Dextro-Amphetamine Phosphate, 5 mg.; Methylcellulose, 150 mg. **Supplied:** Bottles of 100, 500, 1000 at prescription pharmacies everywhere.

Literature and Samples on Request.

Obocell

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to a
complex problem

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With other B-Complex Factors from Liver.		Boron	0.07 mg.

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helps the patient escape from the psychosomatic maze

in anxiety states

sedation without hypnosis

ideal for daytime use...

SEDAMYL is not a barbiturate. Professional literature and samples on request.

Because SEDAMYL* quickly helps overcome anxiety, apprehension, and nervousness without causing drowsiness, "hangover", or impaired perception, it is considered ideal for low-level daytime sedation. Under the gentle influence of SEDAMYL, the patient feels as though he is having one of his "good" days.

SEDAMYL is quickly absorbed, affording rapid and full response. Readily metabolized, it is well tolerated in therapeutic doses and does not produce undesirable circulatory or respiratory effects.

SUPPLIED: Tubes containing 20 tablets; bottles containing 100 tablets; each tablet provides 0.26 Gm. (4 gr.) of acetylbromdiethylacetylcarbamid.

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Pragmatar, the outstanding tar-sulfur-salicylic acid ointment, will often bring dramatic improvement in the common fungous infections, including: dermatophytosis ("athlete's foot"), tinea cruris, tinea corporis, tinea versicolor, tinea capitis, etc.

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PRAGMATAR

Highly effective in an unusually wide range of common skin disorders

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ORETON®

(Testosterone Propionate U.S.P.)

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ORETON supplies androgen to rehabilitate the climacteric or eunuchoid patient.

in the female

ORETON overcomes excessive estrogen activity, and controls functional uterine bleeding and dysmenorrhea. ORETON exerts a palliative effect in carcinoma of the breast.

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ORETON

ORETON, Schering's brand of Testosterone Propionate U.S.P. in oil for intramuscular injection.

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ORETON

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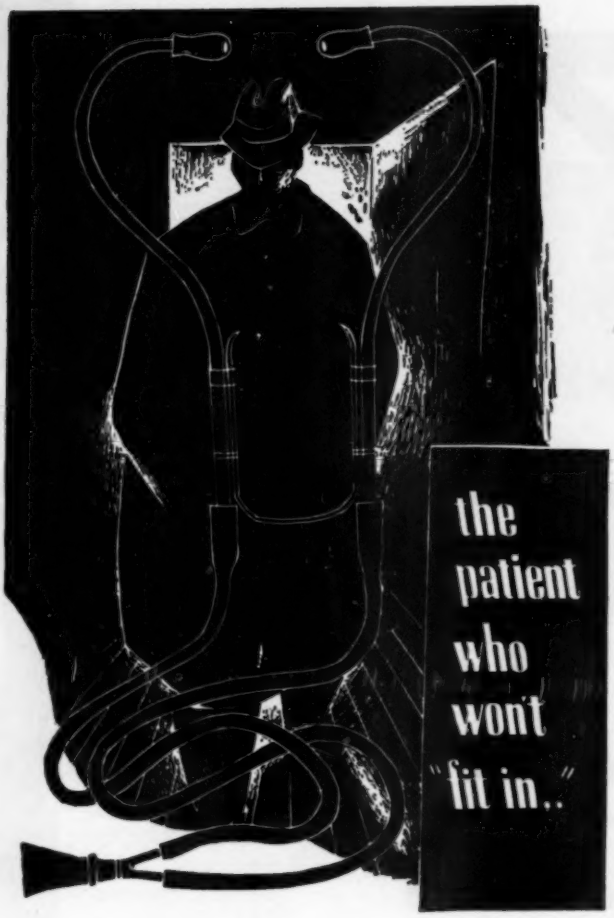

The mentally depressed patient who will neither "fit in" with his surroundings nor cooperate in treatment presents an increasingly wide-spread problem in these anxiety-ridden times. 'Methedrine', given orally, has a remarkable stimulant effect which elevates the patient's mood and produces a sense of well-being.

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Methamphetamine Hydrochloride, 5 mg.

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dosage: *millionths of a gram...*
response: *millions of red blood cells*

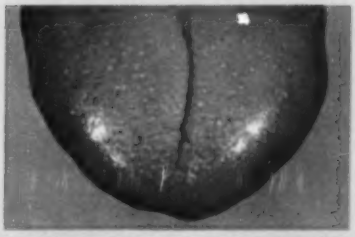
Rubramin

SQUIBB VITAMIN B_{12}

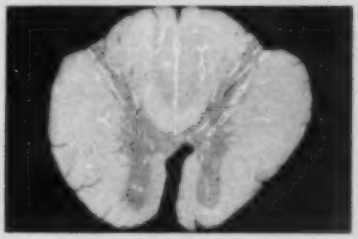
- an aqueous solution
- protein-free
- relatively painless on injection
- safe – even for patients allergic to liver extract
- standardized in vitamin B_{12} activity

Rubramin offers specific therapy...

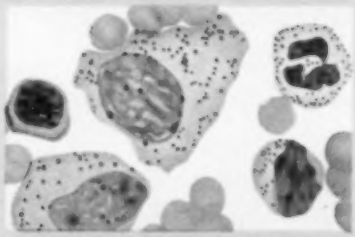
for gastrointestinal response



for neurologic response



for hematologic response



The Squibb RUBRA Family

See following page for formula, dosage and supply for Rubramin . . .

Effective therapy for the common anemias...

	Rubramin per cc.	Rubrafolin per capsule	Rubraton per teaspoonful	Rubraferate per capsule
				
Vitamin B_{12}	15, 30 & 50 micrograms	25 micrograms	4.17 micrograms	4.17 micrograms
Folic Acid		1.67 milligrams	0.28 milligram	0.28 milligram
Iron			220 milligrams ferric ammonium citrate	130 milligrams ferrous sulfate exsic.
Vitamin C				50 milligrams
Therapeutic Dosages	15 to 30 micrograms daily for a week or more; when neurologic involvement is present, 50 micrograms or more daily.	1 or 2 capsules daily	2 teaspoonfuls t.i.d.	2 capsules t.i.d.
Maintenance Dosages	Generally, 30 to 50 micrograms twice a month; when neurologic involvement is present, 50 micrograms a week.	1 capsule daily	1 teaspoonful t.i.d.	1 capsule t.i.d.
Supply	1 cc. ampuls, 15 & 30 micrograms per ampul. 5 & 10 cc. vials, 30 micrograms per cc. 10 cc. vials, 50 micrograms per cc.	Bottles of 100	Pint Bottles	Bottles of 100

Also available: Solution Rubramin Crystalline (Squibb Crystalline Vitamin B_{12} Solution) in 1 cc. ampuls, 15 micrograms of crystalline vitamin B_{12} per ampul, and 10 cc. vials, 30 micrograms of crystalline vitamin B_{12} per cc.

Note: The above are average doses. With all antianemia preparations, dosages must be adjusted to meet the needs of the individual patients. Because of the serious nature of the disease, true Addisonian pernicious anemia should be treated with Rubramin Squibb Vitamin B_{12} parenterally.

Please check samples and literature you desire. Then mail in your envelope to E. R. Squibb & Sons, 745 Fifth Ave., New York 22, N. Y.

Samples	*Literature*
Rubramin	☐
☐ Rubrafolin	☐
☐ Rubraton	☐
☐ Rubraferate	☐

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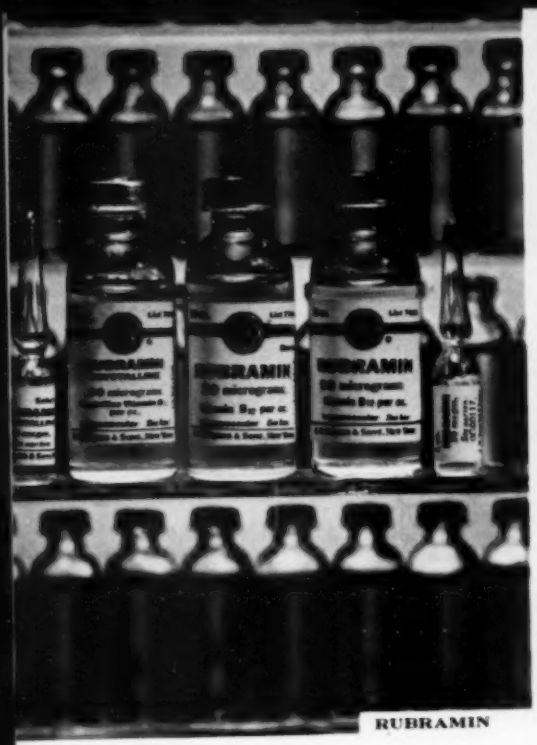
SQUIBB

...see preceding page



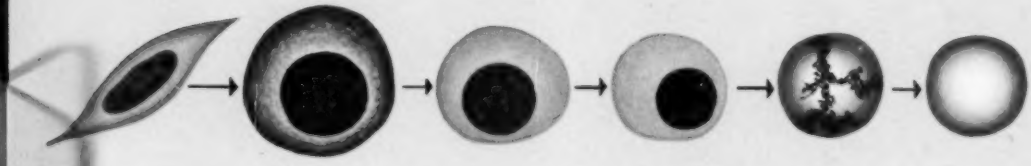
The Squibb RUBRA Family

When anemia is on a nutritional basis...

"critical points" of red blood cell production

Megaloblast stage
Critical Point
Both vitamin B_{12} and folic acid are necessary for blood formation at the megaloblast stage. Neither will produce a therapeutic response in the absence of the other.[1]

Normoblast stage
Critical Point
Adequate iron is necessary for normal division and growth of normoblasts and formation of hemoglobin.[2] Abundant vitamin C is necessary for normoblast maturation.[3]



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Squibb B_{12}, Folic Acid, Iron and C Capsules

Supplies four fundamental factors in red blood cell production

RUBRATON

Squibb B_{12}, Folic Acid and Iron Elixir

A potent, well tolerated hematinic in an elixir that tastes good

RUBRAFOLIN

Squibb Vitamin B_{12} and Folic Acid Capsules

When both vitamin B_{12} and folic acid are necessary for normal erythropoiesis

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2. Haden, R. E.: Principles of Hematology, ed. 3, Philadelphia, Lea & Febiger, 1946, p. 31.
3. Doan, C. A., and Wright, C. S., M. Clin. North America, 33:541, 1949.

The Squibb RUBRA Family

SQUIBB

See preceding page for formula, dosage and supply for Rubraferate, Rubraton and Rubrafolin.

"time heals ~~all~~ *almost* wounds"

But consider *resistant* wounds or lesions which linger despite the usually adequate measures:

indolent ulcers
malodorous fistulas
infected burns
stubborn dermatoses

Chloresium *therapy*

gives time and the physician a helpful adjunct in these cases.

Clinical investigations have demonstrated the beneficial effects of CHLORESIUM (brand of water-soluble chlorophyll derivatives) in facilitating normal tissue repair:

1. **wounds quickly acquire a healthy granulating appearance**
2. **foul-smelling wounds are consistently and rapidly deodorized**
3. **in burns and dermatoses, helps bring about normal tissue repair and epethelization**
4. **non-toxic, bland and soothing**

bibliography

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CHLORESIUM Ointment in 1 oz. and 4 oz. tubes;
CHLORESIUM Solution (plain) in 2 oz. and 8 oz. bottles

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FROM "Intractable" Asthma

ACTHAR therapy can usually control severe bronchial asthma when customary therapeutic measures have failed. ACTHAR is a life-saving measure in status asthmaticus.

Symptomatic relief has been reported to begin within a few hours after the first dose of ACTHAR, followed by marked improvement in vital and maximum breathing capacity. Remissions lasting as long as 10 months have been observed.

OTHER ESTABLISHED INDICATIONS: Rheumatoid arthritis, rheumatic fever, acute lupus erythematosus, drug sensitivities, contact dermatitis, most acute inflammatory diseases of the eye, acute pemphigus, exfoliative dermatitis, ulcerative colitis, acute gouty arthritis, secondary adrenal cortical hypofunction, alcoholism and acute delirium tremens, and severe burns.

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PHYSIOLOGIC THERAPEUTICS THROUGH BIORESEARCH

knocks the starch out of carbohydrate indigestion

In just 10 minutes, under test conditions, the potent amylolytic enzyme Taka-Diastase® liquefies 450 times its own weight of starch. The B-complex vitamins are essential in carbohydrate metabolism and provide an important nutritional supplement. Together, in TAKA-COMBEX LIQUID, this enzyme-vitamin team literally "knocks the starch out of carbohydrate indigestion."

TAKA-COMBEX® *LIQUID*

starch digestant plus B-vitamins

During illness or convalescence, pregnancy or lactation, in the very young or the very old, caloric needs and vitamin requirements are increased. At such times carbohydrate indigestion may be serious. Pleasing in taste and appearance, TAKA-COMBEX LIQUID is especially suited for such patients.

Dosage: Two or more teaspoonfuls during or immediately after meals. Children· According to weight and condition.

each teaspoonful (4 cc.) contains:

Taka-Diastase (Aspergillus oryzae enzymes) (160 mg.)	2½ gr.
Vitamin B_1 (Thiamine Hydrochloride)	2 mg.
Vitamin B_2 (Riboflavin)	1 mg.
Vitamin B_6 (Pyridoxine Hydrochloride)	0.5 mg.
Pantothenic Acid (As the Sodium Salt)	2 mg.
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PARKE, DAVIS & COMPANY

MEDICAMENTA VERA

Diatrine* Hydrochloride

'Warner'

an effective antihistaminic

Selection of an antihistaminic drug from the array available today is a chore from which the physician can easily escape. The selection is simplified by the use of these three criteria: effectiveness, minimum by-effects, and low toxicity. DIATRINE* Hydrochloride 'Warner,' in comparative studies,[1,2,3] has demonstrated these three essentials—effectiveness, minimum by-effects, and low toxicity.

DIATRINE* HYDROCHLORIDE tablets (sugar-coated), 50-mg each, are available in bottles of 100 and 1000 tablets.

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DIATRINE* provides prompt and effective relief of allergic manifestations in a wide range of allergic disorders:

Hay Fever

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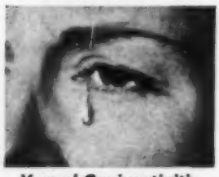

Vernal Conjunctivitis

Erythema Multiforme

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3. *Marton, S.: Diatrin, A New Antihistaminic with Minimal Side Reactions, Annals of Int. Med.,* 33:1444, 1950

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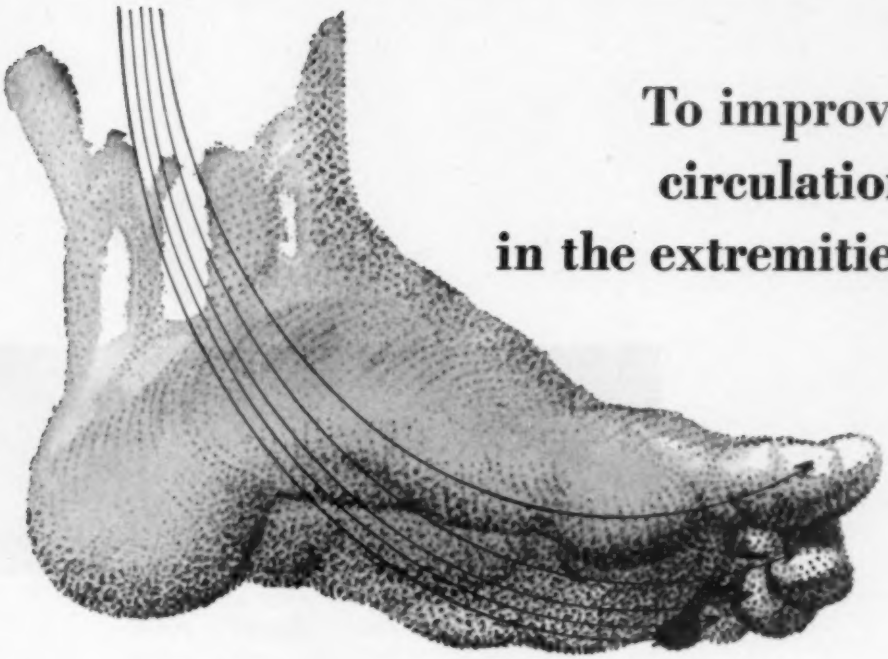


To improve circulation in the extremities

Priscoline

Orally effective vasodilator

Numerous reports on Priscoline have shown favorable results in a wide range of peripheral vascular diseases. By decreasing angiospasm, Priscoline frequently relieves pain and, by increasing the blood supply to the periphery, it promotes healing of ulcers and improves function.

Priscoline® (benzazoline) hydrochloride is available in tablets of 25 mg.; elixir, 25 mg. per 4 cc., and in 10 cc. multiple-dose vials, each cc. containing 25 mg.

Indications:

Raynaud's Disease
Buerger's Disease
Obliterative Arteriosclerosis
Causalgia
Post-Thrombotic Conditions
Frostbite
Prognostic Agent before Sympathectomy

In addition, various experimental indications are given in the literature. Write for complete information and samples.

Ciba Pharmaceutical Products, Inc., Summit, New Jersey

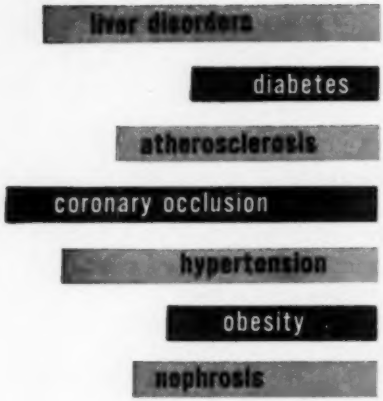
a/ciba

for eye infections

new

more effective In a series of 180 cases, new Gantrisin Ophthalmic Solution proved more effective *"in acute and subacute conjunctivitis produced by either gram negative or gram positive organisms"*†

safer Gantrisin Ophthalmic is *"better tolerated, and less prone to the production of sensitization or allergic reactions than any of the other sulfonamides or antibiotic preparations"*†



Hypercholesterolemia is often found in liver disease, diabetes, atherosclerosis and its associated coronary occlusion, hypertension, obesity and nephrosis.†

Accumulating evidence shows that lipotropic therapy, as available in Methischol, will help to normalize cholesterol and fat metabolism. By reducing elevated blood cholesterol levels in most patients, lipotropic therapy may "prevent or mitigate" cholesterol deposition in the intima of blood vessels. In liver disorders, lipotropic factors reduce excess fatty deposits and encourage regeneration of new liver cells.

newly improved lipotropic formula

methischol

now contains added lipotropic vitamin B_{12}

suggested daily therapeutic dose of 9 capsules or 3 tablespoonfuls provides:

Choline Dihydrogen Citrate	2.5 Gm.*
dl-Methionine	1.0 Gm.
Inositol	0.75 Gm.
Vitamin B_{12}	9 mcg.
Liver Concentrate and Desiccated Liver	0.78 Gm.**

*present in Methischol Syrup as 1.15 Gm. choline chloride
**present in Methischol Syrup as 1.2 Gm. Liver Concentrate

Supplied in bottles of 100, 250, 500 and 1000 capsules, and 16 oz. and 1 gallon syrup.

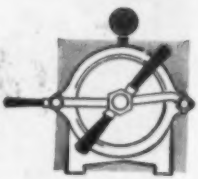
†Write for literature and samples

u. s. vitamin corporation
Casimir Funk Laboratories, Inc. (affiliate)
250 East 43rd St., New York 17, N. Y.

ANACAP®

5 *ways better than ever before*

1 *Greater tensile strength:* **One of the strongest silks ever created — smaller diameter sizes can be used everywhere to minimize trauma and foreign body reaction.**



2 *Withstands repeated sterilization:* **New Anacap Silk can be boiled or autoclaved *six separate times* without appreciable change in either strength or texture. In laboratory tests almost the full original strength is maintained even after 23½ hours of boiling.**

3 *Easier to handle:* **Firmer, not limp, Anacap Silk speeds operative technic. Braided by a new method that minimizes "splintering" and "whiskering" it passes readily through tissues. The ease of handling Anacap makes it a "new experience" in silk suturing.**

4 *Absolute non-capillarity:* **Having no wick-like action, new Anacap Silk is resistant to body fluids and will not spread an early localized infection if it occurs.**

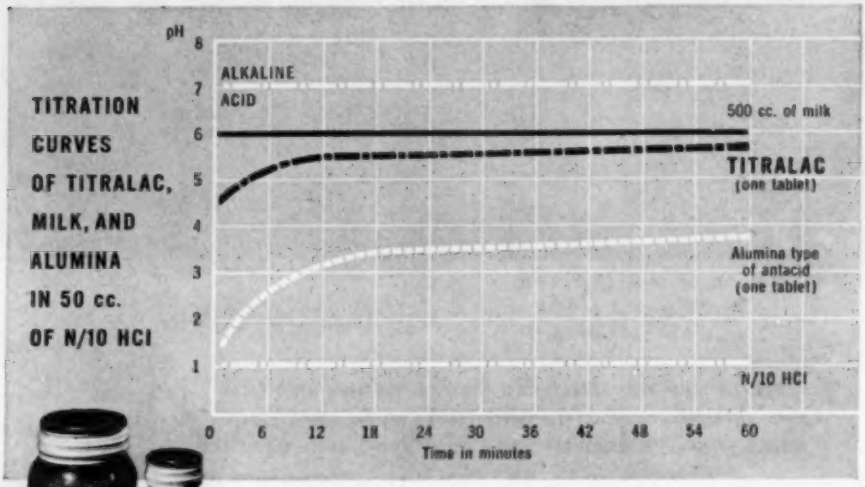
5 *Doubly economical:* **Low in original purchase price, new Anacap Silk is also low in individual suture cost because of its long sterilization life.**

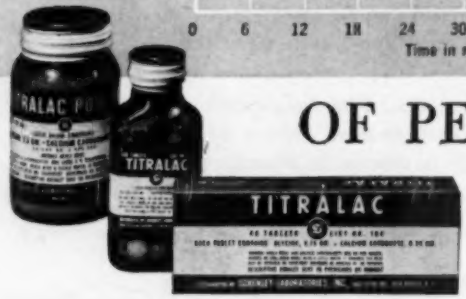
In sizes 6-0 to 5 on spools of 25 and 100 yards; sterile in tubes with and without D & G Atraumatic® needles attached.

DAVIS & GECK, INC.

57 Willoughby Street D&G® *Brooklyn, 1, N. Y.*

NON-SURGICAL TREATMENT





OF PEPTIC ULCER

Gastroenterologists have long endorsed the use of milk, when practicable, for its ideal acid-converting power and buffering capacity.[1, 2] In a recent comprehensive paper, Aaron[3] and others[4, 5, 6] express a preference for calcium carbonate as the antacid to be employed.

TITRALAC, by combining proper proportions of purified calcium carbonate and the amino acid glycine, *provides an acid-converting and buffering effect practically equivalent to that of fresh milk*, as shown in the above chart.* Just 1 TITRALAC tablet is equivalent to an 8-ounce glass of milk in antacid effect and provides quick and long-lasting relief from the distressing symptoms of hyperacidity.

The very agreeable taste of soft-massed TITRALAC tablets, which is achieved without employing taste-disguising, acid-generating sugars in the formula, makes them as acceptable to patients as a mint after dinner. Prescribing TITRALAC eliminates the probability of unfavorable reactions often associated with the taking of metallic-tasting, astringent tablets or liquids, and ensures adherence to the prescribed dosage.

TITRALAC tablets are supplied in bottles of 100 and convenient-to-carry packages of 40. TITRALAC powder is also available, in 4-oz. jars.

REFERENCES

1. Rossett, N. E., and Flexner, J.: Ann. Int. Med. 18: 193 (1944). 2. Freezer, C. R. E.; Gibson, C. S., and Matthews, E.: Guy's Hosp. Reports 78: 191 (1928). 3. Aaron, A. H.; Lipp, W. F., and Milch, E.: J. A. M. A. 139: 514 (Feb. 19) 1949. 4. Kirsner, J. B., and Palmer, W. L.: Illinois M. J. 94: 357 (Dec.) 1948. 5. Kimball, S.: in Practice of Medicine (Tice). Hagerstown, Md., W. F. Prior Company, Inc., 1948; p. 210. 6. Special Article: M. Times 76: 10 (Jan.) 1948.

* The formula of TITRALAC is one whose composition and mode of action are recognized by U.S. Patent No. 2,429,596.

Samples and literature to physicians upon request.

SCHENLEY LABORATORIES, INC., 350 FIFTH AVENUE, NEW YORK 1, N. Y.

Octofen

A POWERFUL FUNGICIDE

Not a "Frightening Concentration!"

Anti-fungal agents which are only fungistatic must be used in such frightening concentrations for results that often patients are more frightened than the fungi! Too, overpowering concentrations may lead to greater incidence of irritation, more frequent relapse or re-infection.

Victor of scores of clinical tests, OCTOFEN is high in potency, low in concentration—outstanding in efficacy, no sensitization or irritation to date.

If you have not yet tried OCTOFEN, you have yet to give athlete's foot the "full treatment!"

McKESSON & ROBBINS
INCORPORATED
BRIDGEPORT 9, CONNECTICUT

Octofen

- Kills fungi on contact.
- Has cleared cases in as short a time as 1 week.
- Reduces, even eliminates danger of over-treatment dermatitis.
- No irritants, heavy metals, tars, oils, phenols, alkalies.
- Potent, nonirritating, greaseless.

Let OCTOFEN prove itself on your most stubborn case —No obligation or expense!

McKESSON & ROBBINS, INCORPORATED Dept. M.T.
Bridgeport 9, Conn.

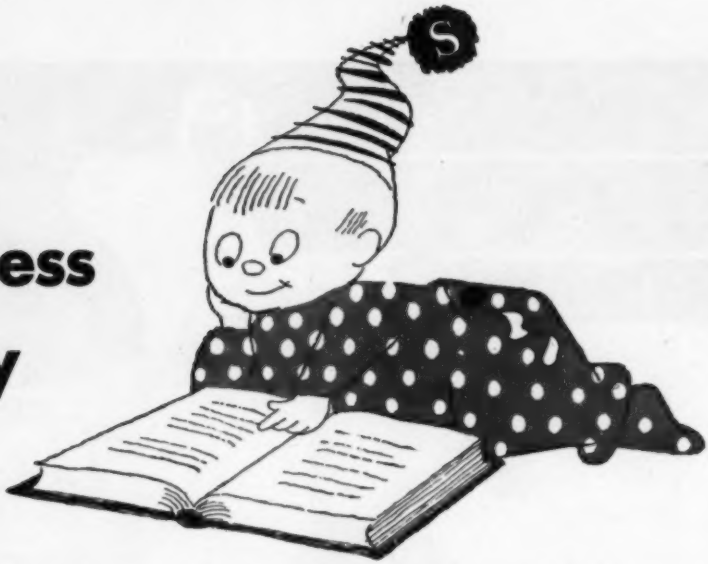
Gentlemen:
Please send me free a clinical sample package of OCTOFEN—sufficient to test its efficacy—and descriptive literature.

Name _____ M.D.

Address _____

City & State _____

Success story



Similac, by providing 50 mg. ascorbic acid to the reliquefied quart, can successfully assist in the protection of the infant not only against scurvy but also against serious hematopoietic deficiencies. Behind this "success story" are some pertinent facts:[1]

1. *Clinically,* megaloblastic anemia in infants is often associated with vitamin C deficiency.
2. *Experimentally,* if vitamin C was inadequate for long periods, the test diets all resulted in megaloblastic anemia.
3. *Because* deficiency of vitamin C leads to a disturbance in folic acid metabolism.
4. No cases of megaloblastic anemia have been known to occur among infants fed vitamin C-fortified Similac.
5. Similac is so formulated "as to insure an adequate intake of vitamin C without supplementation . . ."

In content of vitamin C and other protective factors,

there is no closer equivalent to human breast milk than

SIMILAC

for full term and premature infants from birth to birthday

1. May, C. D.; Nelson, E. N.; Lowe, C. U.; and Salmon, R. J.: Am. J. Dis. Child. *80*:191 (Aug.) 1950.

SIMILAC DIVISION • M & R LABORATORIES • *Columbus 16, Ohio*

in rheumatoid arthritis

effective
safe
inexpensive

The adrenal cortex plays an important role in rheumatoid arthritis. Recent studies have shown a close relationship between sulfur metabolism and adrenal cortical activity. This offers a scientific explanation for the consistently good clinical results which have followed the administration of **Sulphocol Sol.**

Sulphocol® Sol

MULFORD COLLOID LABORATORIES

Solution of Colloidal Sulfur Compound for intramuscular administration

Sulphocol Sol: *25 cc. multiple-dose vials; 12 and 100—2 cc. vials.*

Dose: *0.25 to 0.5 cc. intramuscularly at 3 to 7 day intervals, gradually increased to 3 cc.*

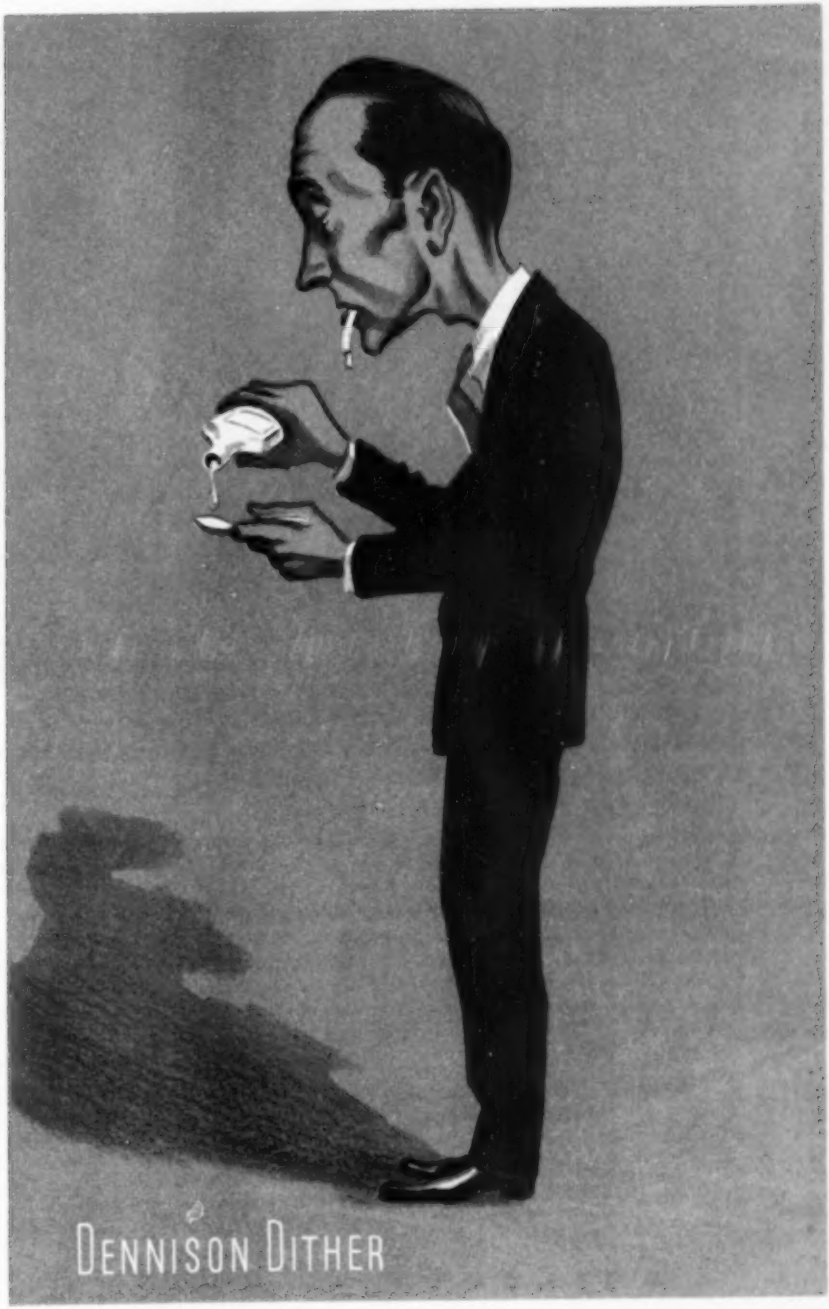
WRITE FOR LITERATURE

The National Drug Company, Philadelphia 44, Pa.

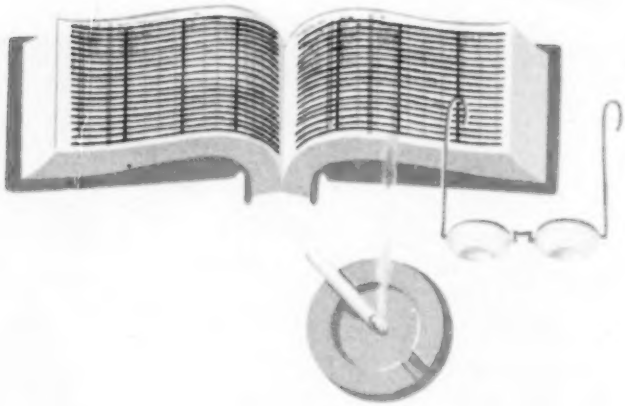
More Than Half a Century of Service to the Medical Profession

A PRODUCT OF THE MULFORD COLLOID LABORATORIES

Problem Patient



dull, dragged-out, and dyspeptic . . .



DENNISON DITHER fidgets and frets over debits and credits and creeping decrepitude, harassed and harried with dubious decimals, the woes of the world, and pyrosis.

In short, Dennison Dither worries himself sick.

Not, of course, that his is a case apart in this day and age — or even an especially interesting one, except as it typifies a growing and pesky problem: that of the middle-aged worriers and hurriers who bedevil their doctors with doleful laments of digestive malaise and misery, while cherishing habit and mending their ways with reluctance or not at all.

A worrisome world will always be full of Dennison Dithers who bemoan "indigestion" and dote on dysphoria. And there's no one way to handle them. But it's said that "the commonest cause" of digestive distress in patients over forty is low grade biliary dysfunction. And such being the case, DEPANCOL will often serve an important two-fold purpose: (1) To afford prompt relief from the classic complaints — flatulence, bloating, dyspepsia, etc. — thus encouraging the patient's early cooperation in a long-range corrective program; and (2) To flush and activate the sluggish biliary system, thus encouraging restoration of normal function by physiologic means.

Depancol®

Dehydrocholic Acid	½ gr.
Bile Salts	1½ gr.
Pancreatic substance equivalent to Pancreatin U.S.P.	4½ gr.

in an enteric coated tablet

Note: no laxatives

SUPPLY Bottles of 50, 500, and 5,000 enteric coated tablets, available at your druggist.

DOSAGE Average: 1 or 2 tablets 3 times daily, with or after meals.

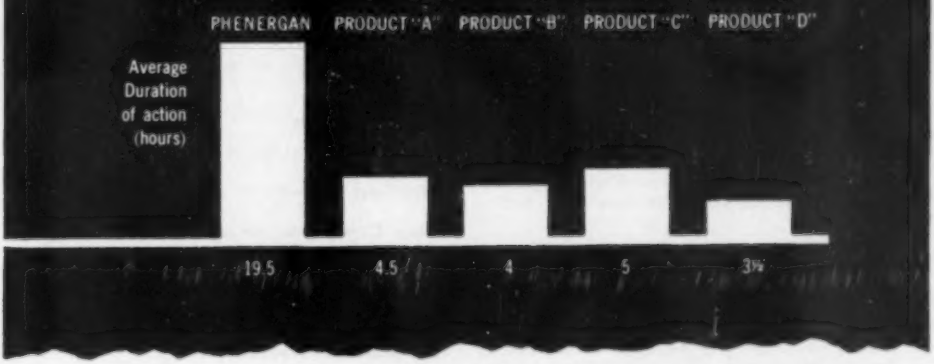
CHILCOTT *Laboratories*

DIVISION OF The Maltine Company

MORRIS PLAINS, NEW JERSEY

"a single daily dose, given at night"

PHENERGAN—the LONG-ACTING antihistaminic



PHENERGAN is Potent. A single bedtime dose of two 12.5 mg. tablets controls symptoms in most cases. PHENERGAN often gives relief when other antihistaminics fail.[1]

The only important side effect, drowsiness (1 out of 5 cases), is a distinct advantage in the bedtime dosage regimen. The antihistaminic action persists long after the soporific effect has worn off.

1. Shulman M.R.: Ann. Allergy, 7:506, 1949

SUPPLIED: Scored tablets of 12.5 mg., bottles of 100.

PHENERGAN®

HYDROCHLORIDE

N-(2'-dimethylamino-2'-methyl) ethyl phenothiazine hydrochloride

Wyeth

Wyeth Incorporated • Philadelphia 2, Pa.

MODERN MEDICINALS

These brief resumes of essential information on the newer medicinals, which are not yet listed in the various catalogs, can be pasted on file cards and a record kept. This file can be kept by the physician for ready reference.

Asterol

Manufacturer: Hoffmann-La Roche, Inc., Nutley 10, N. J.

Indications: In the treatment of fungus infections of the skin, hair and nails, such as ringworm and athlete's foot.

Active Constituents: Dihydrochloride of 2-dimethylamino-6-(beta-diethylamino-ethoxy)-benzothiazole.

Dosage: Ointment or tincture applied once or twice daily. In ringworm of the scalp, employed concurrently with depilation, clipping or shampooing.

How Supplied: Tincture, 5%, 2-oz. and 16-oz. bottles. Ointment, 5%, 1-oz. collapsible tubes. Dusting powder, 5%, 1½-oz. containers.

Dromoran Hydrobromide

Manufacturer: Hoffmann-La Roche, Inc., Nutley 10, N. J.

Indications: For the relief of severe pain, especially in tumors, biliary and renal colic, myocardial infarction, bursitis and neuritis—and for preoperative and postoperative pain relief.

Active Constituents: *dl*-3-hydroxy-N-methylmorphinan hydrochloride.

Dosage: From 2.5 to 5 mg. (½ to 1 cc.) by subcutaneous injection.

How Supplied: In 1 cc. ampuls, 5 mg., boxes of 12 to 100; and in 10 cc. multiple dose vials, 5 mg. per cc. Narcotic license required.

Methostan

—Schering Corp. (see listing for STENEDIOL).

Phenergan Hydrochloride

Manufacturer: Wyeth, Inc., Philadelphia 2, Pa.

Indications: In all conditions in which antihistaminic therapy is indicated such as urticaria, hay fever, asthma, angio-neurotic edema, allergic rhinitis, etc.

Active Constituents: N-(2'-dimethylamino-2'-methylethyl) phenothiazine hydrochloride.

Dosage: As indicated.

How Supplied: Scored tablets of 12.5 mg., bottles of 100.

Thiocarbarsone

Manufacturer: Eli Lilly & Co., Indianapolis, Ind.

Indications: In treatment of intestinal amebiasis.

Active Constituents: 4-Carbamidophenyl di-(carboxymethylthio) arsenite.

Dosage: Adults: 100 mg. three times daily for ten days. Children: 4 to 6 mg. per kilogram of body weight divided into three or four portions daily.

How Supplied: "Enseals" in 25 mg., in bottles of 100 and in 50 mg., in bottles of 100. Powder Thiocarbarsone Solubilized in packages of 6 vials of 0.5 Gm. Thiocarbarsone and 1.8 Gm. sodium bicarbonate.

Stenediol, Methostan

Manufacturer: Stenediol, Organon, Inc., Orange, N. J.; Methostan, Schering Corp., Bloomfield, N. J.

Indications: In the treatment of those conditions in which a tissue-building action is desired, as in retarded growth and certain endocrine deficiencies and constitutional disease.

Active Constituent: Mestenediol.

Dosage: Average dosage employed has been 25 mg. orally, bucally, or intramuscularly two to five times a week. In children, a suggested initial dosage is from 5 to 10 mg. one to three times a week. The dosage must be adjusted so that the androgenic effect will be held to the minimal desired in the individual case.

How Supplied: Stenediol, 10 cc. vial, 25 mg. per cc., boxes of 1 and 6; 10 mg. oral and buccal tablets, bottles of 30 and 100; 25 mg. oral and buccal tablets, bottles of 15 and 100. Methostan tablets, 25 mg., bottles of 30 and 100; aqueous suspension multiple-dose vials of 10 cc., containing 50 mg. per cc., boxes of 1 to 6 vials.

—Continued on page 49a

BELIEVE IN YOURSELF!

Doctor, you probably have read a great deal of cigarette advertising with all sorts of claims.

So we suggest: make this simple test . . .

Take a PHILIP MORRIS—and *any* other cigarette. Then,

1. Light up either one. Take a puff — don't inhale — and s-l-o-w-l-y let the smoke come through your nose.

2. Now do exactly the same thing with the other cigarette.

Notice that PHILIP MORRIS is definitely less irritating, definitely milder.

Then, Doctor, ***BELIEVE IN YOURSELF!***

PHILIP MORRIS

Philip Morris & Co. Ltd., Inc.
100 Park Avenue, New York 17, N. Y.

a most significant advance

TROMEXAN T. M.

ethyl acetate

new, safer, oral anticoagulant

Throughout the exhaustive studies on TROMEXAN, involving many hundreds of cases, this new anticoagulant has proved singularly free from the dangers of hemorrhagic complication. Other advantageous clinical features of TROMEXAN are:

1 ***more rapid therapeutic response***
(therapeutic prothrombin level in 18-24 hours);

2 ***smooth, even maintenance of prothrombin level***
within therapeutic limits;

3 ***more rapid return to normal***
(24-48 hours) after cessation of administration.

In medical and surgical practice . . . as a prophylactic as well as a therapeutic agent . . . TROMEXAN extends the scope of anticoagulant treatment by reducing its hazards.

Detailed Brochure Sent on Request.

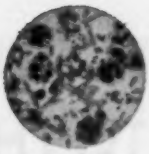
TROMEXAN (brand of ethyl biscoumacetate): available as uncoated scored tablets, 300 mg., bottles of 50 and 250.

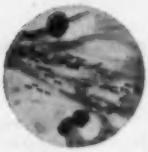
Geigy

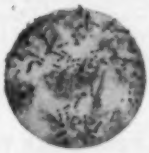
GEIGY COMPANY, INC.
Pharmaceutical Division, 89-91 Barclay St., New York 8, N. Y.

A broad antimicrobial spectrum:

staphylococci
streptococci
pneumococci
gonococci
H. influenzae
Koch-Weeks bacillus
Morax-Axenfeld diplobacillus
Friedländer's bacillus
E. coli
A. aerogenes



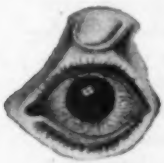


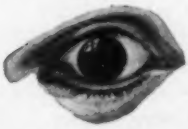


...in ocular infections

A wide clinical range:

conjunctivitis
blepharitis
keratitis
hordeola
dendritic ulcer
corneal ulcer
epiphora secondary to conjunctival infection
preoperative prophylaxis
trachoma





CRYSTALLINE
Terramycin
HYDROCHLORIDE
for topical use only

Ophthalmic Ointment

A suspension of Crystalline Terramycin Hydrochloride in a petrolatum base. One Gm. of ointment provides 1 mg. of Terramycin hydrochloride. Available in tubes containing ⅛ oz.

CRYSTALLINE
Terramycin
HYDROCHLORIDE

Ophthalmic Solution

Supplied as a dry mixture of Crystalline Terramycin Hydrochloride and a sodium borate-sodium chloride buffer for preparation of topical solutions. Each 5 cc. vial provides 25 mg. of Terramycin to be dissolved in 5 cc. of Water for Injection, U.S.P. Solutions are isotonic with lacrimal fluid and buffered to pH 8.2.

In deep-seated and systemic infections, local treatment is recommended as an adjunct to oral Terramycin therapy.

Pfizer

Antibiotic Division
CHAS. PFIZER & CO., INC.
Brooklyn 6, N.Y.

LETTERS TO THE EDITOR

This department is offered as an Open Forum for the discussion of topical medical issues. All letters must be signed. However, to protect the identity of writers, who are invited to comment on controversial subjects, names will be omitted when requested.

RESPONSE TO ANTIBIOTIC THERAPY

"The April issue (1951) which carried my article on terramycin in a hemopoietic disorder, stressing that the material could not be functioning as an 'anti-infective' agent in the classic sense, also contained an abstract which has much bearing on the general topic and points up the necessity for a modification in our thinking as to the usual mechanism of response to antibiotic agents. Donovick, Rake and Titus, whose report to the New York Academy of Sciences appears in this abstract, show that the *in vivo* antitubercular activity of certain compounds in no way parallels their *in vitro* mycobacteriostatic effect. This has long been suspected as a corollary of the generally accepted fact that tuberculous patients continue to do well on (or at least better than without) streptomycin therapy even when the organisms they harbor have become so streptomycin-resistant that no practically attainable tissue antibiotic concentration would inhibit their propagation. It is now fairly certain that clinical improvement results from such continued antibiotic therapy because the streptomyces-derived antibiotics, or others which may be gram-negative bacillary suppressors, permit the operation of the adreno-

—Continued on page 52a

The Venus of Willendorf,
Paleolithic Period,
circa 20,000 B.C.
Royal Museum of Vienna

a new approach to sound obesity management

"The weight reducing diet, adjusted to the patient's age, must contain adequate amounts of protein, minerals and vitamins to meet the requirements for these essentials while supplying no more than one half to three fourths of the calories that would be needed to maintain constant weight."

G. P., Oct. 1950, p. 37 — Obesity in Children — Irvine McQuarrie, M. D.

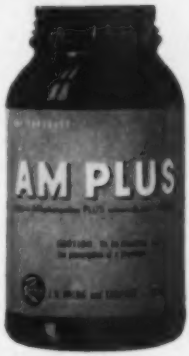
AM PLUS, containing dextro-amphetamine sulfate, combined with 11 minerals and trace elements and 8 vitamins make possible:

- *Effective appetite curtailment to reduce caloric intake*
- *Correction of deficiencies caused by the restricted diet*
- *Patient cooperation through improvement of mood*

The AM PLUS treated patient is in a better state of health at the end of the obesity regimen.

for sound obesity management specify

AM PLUS



DEXTRO-AMPHETAMINE SULFATE... 5 MG.

Calcium	242 mg.	Vitamin A	5,000 USP Units
Cobalt	0.1 mg.	Vitamin D	400 USP Units
Copper	1 mg.	Thiamine HCl	2 mg.
Iodine	0.15 mg.	Riboflavin	2 mg.
Iron	3.33 mg.	Pyridoxine HCl	0.5 mg.
Manganese	33 mg.	Niacinamide	20 mg.
Molybdenum	0.2 mg.	Ascorbic Acid	37.5 mg.
Magnesium	2 mg.	Pantothenate Ca	3 mg.
Phosphorus	187 mg.		
Potassium	1.7 mg.		
Zinc	0.4 mg.		

Available at prescription pharmacies... supplied in bottles of 100 capsules

J. B. ROERIG AND COMPANY ROERIG 536 Lake Shore Dr., Chicago 11, Illinois

CHRONOLOGICA

1871 A. Baeyer[1] first prepared a compound, which he named "phenolphthalein." For three decades it was used only as an indicator in chemical procedures.

1902 Vamossy[2] discovered the laxative properties of phenolphthalein. Clinical investigations have shown it to be superior in many respects to the laxatives in use. However, effects were attributed to the use of phenolphthalein which in the light of present day research proved to be unfounded.

1935 The introduction of the halogenated compounds of phenolphthalein, such as tetraiodophenolphthalein, doubtless contributed to the confusion. Indeed, Abramowitz[3] reported that he "may state that while the literature shows that the halogen salts of phenolphthalein may cause necrosis of the liver, no instance has been reported of any hepatotoxic effects due to phenolphthalein." No such report has appeared up to this time.

1937 Later reports dispelled every vestige of validity of the erroneous beliefs held by some concerning phenolphthalein. Fantus and Dyniewicz[4] studied the results from the administration of 1000 doses of phenolphthalein to normal subjects and to patients. They concluded that "medicinal doses of phenolphthalein do not produce albuminuria." In 4500 tests of the urine of patients, they noted improvement in some cases where albuminuria already existed.

1938 Steigmann and his coworkers[5] investigated the effect of phenolphthalein on the liver in 300 cases of jaundice. They reported that "no evidence of phenolphthalein-produced liver damage has been found" as indicated by the galactose tolerance test.

1939 Loewe[6] as well as Bartlett and Herbine[7] reported simultaneously that the rhesus monkey was a suitable animal for testing the laxative efficiency of phenolphthalein, because this monkey reacts to the laxative in a similar way as humans. This opened the way to the study of the physiological and toxicological action of phenolphthalein, and made the biological standardization of phenolphthalein possible.

1943 M. L. Blatt and associates[8] analyzed the results of four cases of overdosage with phenolphthalein. The amounts taken were 12, 15, 96, and 130 grains. They found "no significant pathology" as a result of these excessive doses.

1950 In a critical review of the present status of phenolphthalein, Abramowitz[9] reaffirmed his earlier statement before the 57th Annual Meeting of the American Dermatological Association that "phenolphthalein cannot be classed as a poison in view of the numerous instances in which an overdose has passed off without any alarming symptoms." Numerous other pharmacological and clinical observations have placed the stamp of approval on phenolphthalein as a non-toxic, useful laxative, safe in a wide range of dosage for adults and children.

The phenolphthalein used in Ex-Lax is subjected to special chemical control and biological standardization to assure uniform efficiency, and unusual palatability is achieved by the chocolated base of Ex-Lax.

A trial supply of Ex-Lax and literature gladly sent to physicians on request. Ex-Lax, Inc., Brooklyn 17, New York.

1. A. Baeyer: Ber. 4:658, 1871.
2. Z. v. Vamossy: Therap. Gegenwart 202:69, 1902.
3. E. W. Abramowitz: Arch. Derm. Syph. 31:777, June, 1935.
4. B. Fantus and J. M. Dyniewicz: J.A.M.A. 108:439, Feb. 6, 1937.
5. F. Steigmann, R. D. Barnard, and J. M. Dyniewicz: Am. J. Med. Sciences 196:673, Nov., 1938.
6. S. Loewe: J. Am. Pharmaceut. Asso. 28:427, July, 1939.
7. K. A. Bartlett and R. H. Herbine: J. Am. Pharmaceut. Asso. 28:427, July, 1939.
8. M. L. Blatt, F. Steigmann, and J. M. Dyniewicz: J. Pediat. 22:719, June, 1943.
9. E. W. Abramowitz: Am. J. Digest. Dis. 17:79, March, 1950.

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High Potency Multivitamin Capsules

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Unusually complete
Well-balanced formula
Supplied: Bottles of 100

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For your obstetric and other patients who require a "heavy duty" hematinic Iron, copper, B vitamins (including a substantial amount of B_{12}), vitamin C, and dried liver.
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A comprehensive vitamin-mineral formula to help maintain adequate dietary supplementation. Excellent for obstetric and geriatric patients.
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When the diagnosis is Prostatitis

First:

consider

to establish
and maintain
urinary antisepsis...

The value of MANDELAMINE* as a urinary antiseptic in the chemotherapy of prostatitis is based on (1) its wide antibacterial range, (2) exceptional freedom from drug-fastness —MANDELAMINE retains its therapeutic potency even against organisms which have become resistant to other antibacterial agents, (3) absence of untoward reactions in nearly all patients, and (4) simplicity of regimen.

Lowsley and Kirwin[1] recommend methenamine and mandelic acid in prostatic disease, especially when resistance or intolerance excludes the sulfonamides. A daily dose of 2.25 Gm. MANDELAMINE provides the antibacterial potency of 12 Gm. mandelic acid or 4 Gm. methenamine. Moreover, since MANDELAMINE approximates the sulfonamides and streptomycin in effectiveness, it may be used *first* whenever the diagnosis is prostatitis.

Other indications for MANDELAMINE are pyelitis, pyelonephritis, nonspecific urethritis, and infections associated with urinary calculi or neurogenic bladder; also valuable for pre- and postoperative prophylaxis in urologic surgery.

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1. Lowsley, O. S., and Kirwin, T. J.: Clinical Urology. Baltimore, Williams & Wilkins Company, 1944; vol. 1, p. 939.

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Pharmaceutical Manufacturers
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Control of pain and associated nervous tension requires

both analgesia and sedation

'EMPIRAL' TRADE MARK

has the DOUBLE ACTION which relieves pain and promotes restfulness

Each compressed product of 'Empiral' contains:-

Phenobarbital	gr. ¼
Acetophenetidin	gr. 2½
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Also available 'TABLOID' 'EMPIRIN' COMPOUND® *with and without Codeine Phosphate*

BURROUGHS WELLCOME & CO. (U.S.A.) INC. TUCKAHOE 7, NEW YORK

—Continued from page 36a

ADDITIONAL NEW PRODUCTS

Space for the full listing of the following new products, new dosage forms, changes in formula, etc., is not available in this issue. Essential information is given and if the physician will keep this alphabetical arrangement with his other new medicinal listings, he will have a comprehensive file of all those new products which have not yet appeared in the various catalogs.

ACTH (National Drug, Philadelphia 44, Pa.) Adrenocorticotropic hormone prepared by special process assuring stability and in ready-to-inject solution. **Dose:** As Indicated. **Sup.:** Multiple dose vials of 10 cc.

Americaine Liquid (Americaine, Evanston, Ill.) Local anesthetic in urology. **Dose:** In male urethra, 5 cc. instilled with asepto syringe, about 3 minutes before instrumentation. In female urethra, apply 5-10 drops with sterile swab. **Sup.:** In 4-oz. bot.'s singly and packages of 12.

Anacol Cough Syrup (Warren-Teed, Columbus 8, Ohio) Sedative and anodyne expectorant. **Dose:** Adults; 1 teaspoonful every 3 hours. Children: Smaller doses according to age. **Sup.:** In pints and gallons.

Aquasol A-C-D Drops (U. S. Vitamin, New York 17, N. Y.) In prevention and treatment of vitamin A, C and D deficiencies. **Dose:** As indicated. **Sup.:** Bot.'s of 15 cc. and packages of 30 cc., with dosage-marked droppers.

Concivite (Colin Pharmacal, Long Island City 1, N. Y.) Aqueous multivitamin drops. **Dose:** Children; 0.3 to 0.6 cc. daily. Adults; 0.6 to 1.2 cc. **Sup.:** In 15 cc. and 30 cc. bottles with calibrated dropper.

Di-Met (Organon, Orange, N. J.) For menopausal symptoms & menopausal osteoporosis. **Dose:** Orally, 1 or 2 Di-Met tablets per day. Bucally, ½ to 1 Di-Met tablet every day or on alternate days. Intramuscularly, 0.5 cc. 2 or 3 times a week. **Sup.:** Bot.'s 30 and 100 tabs., 10 cc. vial.

Ebicol Elixir-MRT (M. R. Thompson, Stamford, Conn.) Therapy for lipotropic action in derangements of fat metabolism. **Dose:** 1 teaspoon to 1 tablespoon 3 times daily with meals. **Sup.:** In 8 fl. oz. and gal. bot.'s.

Enseals Pas (Eli Lilly, Indianapolis, Ind.) In tuberculosis. **Dose:** 10 to 15 Gm. given orally in 4 or more divided doses as an adjuvant to streptomycin or dihydrostreptomycin therapy. **Sup.:** Bot.'s 500, 1,000, and 5,000.

Erythgen (G. W. Carnrick, Newark 1, N. J.) Oral anti-anemia preparation. **Dose:** Ordinary hypochromic anemias, 2 tabs. 3 times daily. Macrocytic anemias, 6 tabs. daily. **Sup.:** Bot's. 100 and 1,000 tabs.

Ferrophyll (Lakeside, Milwaukee 1, Wisc.) Hematinic for hypochromic anemia. **Dose:** One tab. 3 times daily. **Sup.:** Bot.'s 50 tabs.

Gantrisin Diethanolamine Ophthalmic (Hoffmann-La Roche, Nutley 10, N. J.) Sulfonamide for eye infections. **Dose:** As Indicated. **Sup.:** 1-oz. vial with dropper.

Gerone (Pitman-Moore, Indianapolis 6, Ind.) Antidepressant nutrient. **Dose:** 1-2 teaspoonfuls (5-10 ccs.) 3 times daily. **Sup.:** Cartons of six 8-oz. bot.'s.

Gynetone (Schering, Bloomfield, N. J.) Estrogenic and androgenic steroids in suitable ratio for menopause. **Dose:** As indicated. **Sup.:** Bot.'s 30 and 100 tabs. In 10 cc. multiple dose vial, boxes of 1 and 6 vials.

Hydrolose Syrup (Upjohn, Kalamazoo 99, Mich.) Laxative. **Dose:** Adults; 1 tablespoonful 2 times daily. Children; 1 or 2 teaspoonfuls once or twice daily.

Kalpec (Wyeth, Philadelphia 2, Pa.) Formerly supplied as KAOMAGMA with PECTIN.

Natrinil (National Drug, Philadelphia 44, Pa.) Cation exchange resin indicated whenever a "salt-free" or low sodium diet is required. **Dose:** 4 level tablespoonfuls in divided doses with each meal and before bed. **Sup.:** Powder, bottles of 10 ounces. Individual packets of 10 Gm. each, boxes of 24.

Odi-Late (Warren-Teed, Columbus 8, Ohio) A choleretic-antispasmodic. **Dose:** Adults; 1 or 2 tabs. 3 times daily before meals. **Sup.:** Bot.'s 100 and 1,000 tabs.

Proferrin (Sharp & Dohme, Philadelphia 1, Pa.) In iron deficiency anemia. **Dose:** As indicated. **Sup.:** In 20 cc. vials.

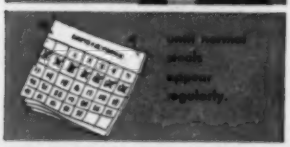
Pyribenzamine Solution for Injection (Ciba, Summit, N. J.) Antihistaminic parenteral solution. **Dose:** 25 mg. twice daily. **Sup.:** 25 mg. ampuls in cartons of 5.

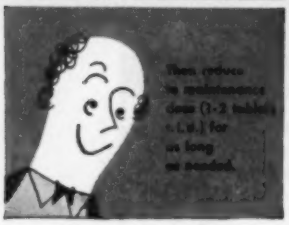
Redisol Tablets (Sharp & Dohme, Philadelphia 1, Pa.) Stimulation of appetite. **Dose:** As indicated. **Sup.:** Bot.'s 36 tabs

Sedorzyl (Henry K. Wampole, Philadelphia 23, Pa.) For relief of respiratory congestion. **Dose:** Adults; 1 teaspoonful every 2 to 4 hours. Children; proportionately less than adult dosage. **Sup.:** 1-pint bottles.

To correct years of constipation with peristalsis-stimulating bulk . . .

Cellothyl





The problem of

Intestinal Stasis

The physician finds in treating intestinal stasis that the patient has usually "doctored" himself for years with cathartics or enemas; his bowel habits may be bad; he is often convinced that not constipation but "something else" is wrong.

Despite these handicaps to therapy, the patient can be convinced that his condition is correctible, even where it has existed for years. But first he must accept the idea that he is being offered neither a "quick cure" nor mere temporary relief; that the goal of therapy is *correction.*

As corrective therapy, Cellothyl affords special advantage for it acts to rectify several common, often co-existing factors:

1. **bulk deficiency** . . . *by providing adequate bulk of proper consistency*
2. **hypomotility** . . . *by encouraging peristalsis through gentle mechanical stimulation*
3. **inspissation** . . . *by retaining water*
4. **dyschezia** . . . *by assuring soft, moist, easily passed stools.*

Normal, well-formed stools usually begin to appear in 3 to 4 days. However, bowel function improves markedly only when therapy is continued until Cellothyl's peristalsis-stimulating bulk achieves intestinal regularity.

Where an anticonstipation regimen is required, a simplified program is available in a small leaflet entitled "7 Rules for 7 Days". After outlining the faulty habits which cause intestinal dysfunction—poor diet, delayed defecation, etc.—it presents 7 simple rules to be followed for at least 7 days. To obtain copies: write "7 Rules" on a prescription blank and forward to Chilcott Laboratories, Morris Plains, New Jersey.

Cellothyl® BRAND OF METHYLCELLULOSE ESPECIALLY PREPARED BY THE CHILCOTT PROCESS

Available: Cellothyl Tablets *(0.5 Gram) in bottles of 100, 500 and 5000.*
Cellothyl Granules, *for pediatric use, in bottles of 25 and 100 Grams.*

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MORRIS PLAINS, NEW JERSEY

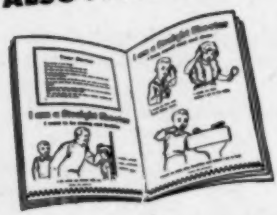
HANDY TIMESAVERS FOR YOU!

PEDIATRIC FEEDING DIRECTIONS

(birth to 3 mos., 3 to 6 mos., 6 to 10 mos., over 10 mos.)

Easy to use, complete, adaptable to individual patients. Each contains: formula or diet charts; food lists; food preparation methods; weight record; spaces for your directions, next appointment. Available in pads of 50, imprinted if desired.

ALSO . . . This Gift for your young patients



Eight-page book with pictures for the youngster to color. Emphasizes health practices and other good habits you and the mother want the child to develop. Yours —to give your young patients.

When Rapid Growth Calls for HIGH IRON and THIAMINE— Remember RALSTON!

Instant Ralston is a *rich* source of iron and thiamine. A single 1-ounce serving supplies the following percentages of the minimum daily requirement:

	1-6 years	6-12 years	adults
IRON	113%	84.9%	84.9%
THIAMINE	84%	56%	42%

Plus 3.5 Gm. PROTEIN

Cooks in 10 seconds

Instant Ralston supplies riboflavin and niacin, too . . . in appetizing, readily digested form.

USE THIS COUPON TO ORDER **FREE** FEEDING DIRECTIONS AND COLOR BOOK

Samples of this FREE material— and a postage-paid card—will be sent so you may order in quantity.

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Please send the FREE material checked below:

☐ 1 set C848 Feeding Direction Forms
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The

most
widely prescribed
vaginal jelly

Now

ten times more
spermicidal

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Aci-jel®

combats vaginitis

by restoring vaginal acidity

in nonspecific vaginitis

Aci-jel rapidly controls symptoms, discourages pathogens and favors re-establishment of normal flora.

in recurrent vaginitis

Aci-jel—used before, during and after menses—largely prevents recurrences.

after vaginal surgery

healing is hastened and symptoms controlled by Aci-jel, a highly buffered acid (pH 4.0) vaginal jelly. In a recent comparative study* Aci-jel showed

"the best maintenance of vaginal acidity"

"a good Döderlein response"

"complete symptomatic relief"

"patient comfort [that] was outstanding"

Aci-jel® is available in 3 oz. tubes. On original prescriptions specify "Aci-jel with applicator."

*Slater, F. C.: Am. J. Obst. & Gynec. 59:1089 (May) 1950.

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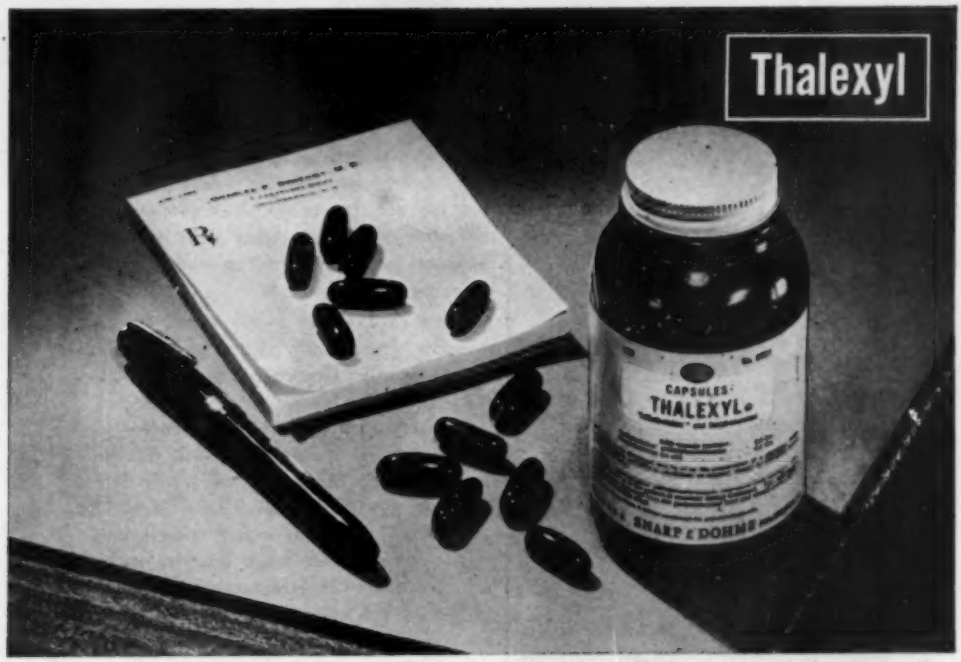


The distinctive elongated shape of Thalexyl Capsules makes them easy to swallow.

Simultaneous use of Sulfathalidine® and Hexylresorcinol recommended for thorough treatment in

COMMON URINARY-TRACT INFECTIONS

Clear, sparkling urine is usually obtained within one week.

THALEXYL® Capsules contain *Sulfathalidine®* and *hexylresorcinol* in a single dosage form—provide bacteriostatic and analgesic actions for control of infection and relief of symptoms in acute and chronic *cystitis, pyelitis,* and *ureteritis.*

Symptoms are usually brought under control promptly: pain, burning, and tenesmus are relieved. Especially gratifying is the release from the frequent urge to urinate which, before treatment, is sometimes so troublesome as to wake patients several times during the night.

THALEXYL is effective against *Escherichia coli* and various cocci. It usually renders urine sterile within one week, but medication should be continued for a total of three weeks to ensure against recurrence of infection.

Recommended dose for adults: 4 capsules three times a day (total daily dose of Sulfathalidine: 6.0 Gm.; of hexylresorcinol: 1.2 Gm.).

Recommended dose for children 6 to 12 years of age: 3 capsules three times a day (total daily dose of Sulfathalidine: 4.5 Gm.; of hexylresorcinol: 0.9 Gm.).

Capsules should be taken after each meal to avoid possibility of gastric irritation; they should be swallowed whole with water. Fluid intake should be restricted, and diuretics should be avoided during treatment. Sharp & Dohme, Philadelphia 1, Pa.

THALEXYL®

Capsules Sulfathalidine® and Hexylresorcinol

LETTERS TO THE EDITOR

—Continued from page 40a

cortitropin-corticosteroid mechanism, i.e., they have 'corticomimetic' effect and arrest the reactive tuberculous process in the same way that either dehydrocorticosterone or pituitary adrenocorticotropin have been shown to do.

"This explanation is on much firmer theoretic ground now that viomycin, the most recently introduced mycobacteriostatic, has been shown to induce marked sodium retention and potassium depletion in tuberculous humans [Werner, C. A., Tompsett, K., Muschenheim, C., & McDermott, W., *Am. Rev. Tuber.*, *63*:49 (Jan.) 1951], a definite adrenocorticomimetic effect that we know likewise to be a concomitant of streptomycin therapy, as well, in this and other conditions where an adrenocorticotropic reaction is in order but fails to occur because of the morbid status. It does occur when certain antibiotics are administered and it is this feature of their activity which may have rendered antibiotic therapy much more generally successful than can be accounted for by 'specific' tissue bacteriostasis or their ability to inhibit 'viruses' whose presence is questionable in any event.

"There is no circumventing the implications of recent findings that terramycin, which is not particularly mycobacteriostatic *in vivo*, is nevertheless quite effective in experimental tuberculous infection; that the levels obtained in the tissues under these circumstances are hardly mycobacteriostatic at all; that relatively insoluble streptomycin salts (which are not supposed to leave the intestinal tract) are reasonably effective in experimental tuberculosis when administered *orally;* that this antibiotic, which has no particular 'virocidal' activity, is effective in atypical pneumonia [King, F. P., *Ann. Int. Med.*, *34*:141-147 (January) 1951] and that this

—Continued on page 394

To banish depression and nervousness

'Benzebar'—S.K.F.'s logical combination of 'Benzedrine' Sulfate and phenobarbital—ordinarily will dispel the mental depression and relieve the anxiety and tension that accompany so many of life's situations:

These occur, for example, *in association with* : : : family and financial troubles, chronic organic disease, persistent pain, old age and grief; *or following* . . . acute infectious disease, surgical operations, onset of the menopause and childbirth.

Smith, Kline & French Laboratories, Philadelphia

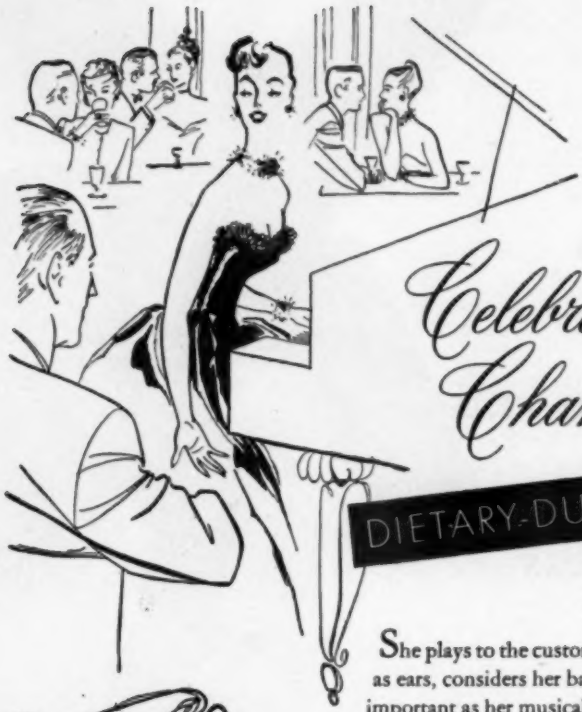
Benzebar*

the unique antidepressant

action of 'Benzedrine'* Sulfate and the mild sedation of phenobarbital

Each 'Benzebar' tablet contains 'Benzedrine' Sulfate (racemic amphetamine sulfate, S.K.F.), 5 mg.; phenobarbital, ¼ gr.

*T.M. Reg. U.S. Pat. Off.



Celebrated Chanteuse

DIETARY-DUB!

She plays to the customers' eyes as well as ears, considers her bathroom scales as important as her musical scales. Unfortunately, her off-key dieting may soon serenade a subcritical vitamin deficiency. For deficiencies of the B complex, many physicians prescribe SUR-BEX as supplemental therapy to a corrected diet. With the addition of vitamin B_{12}, SUR-BEX now supplies six B complex factors in a well-balanced formula—yet triple-coated SUR-BEX tablets are good tasting, easy to swallow.

The same potent B complex formula, *plus* five times the minimum daily requirement of ascorbic acid, is supplied by SUR-BEX WITH VITAMIN C tablets. Both tablet forms are supplied in bottles of 100, 500 and 1000. For patients who dislike tablets, a new liquid form—SUR-BEX SYRUP—is now available. A therapeutic formula in pleasant-tasting form. Supplied in 1-pint and 1-gallon bottles.

Each SUR-BEX® Tablet contains:

Thiamine Mononitrate	6 mg.
Riboflavin	6 mg.
Nicotinamide	30 mg.
Pyridoxine Hydrochloride	1 mg.
Vitamin B_{12} (as vitamin B_{12} concentrate)	2 mcg.
Pantothenic Acid (as calcium pantothenate)	10 mg.
Liver Fraction 2, N.F.	0.3 Gm. (5 grs.)
Brewer's Yeast, Dried	0.15 Gm. (2½ grs.)

Sur-bex with Vitamin C contains 150 mg. of ascorbic acid in addition to the vitamin B complex factors above.

Abbott

Differential Diagnosis of Acute Chest Pain

SAMUEL A. LOEWENBERG, M.D., F.A.C.P.*
Philadelphia, Penna.

Pain is a valuable symptom which indicates a disease process. To properly evaluate the degree of pain one has to bear in mind that the severity of the disease does not always coincide with the amount of pain complained of by the patient. The two factors involved are personal sensitivity to pain and the type of tissue affected.

Personal Sensitivity There are individuals who are extremely pain sensitive, and who will moan, complain, cry and carry on after a trifling injury. On the other hand, there are individuals who will accept stoically a very serious injury, only indicating where the hurt is present. Between these two extremes, there are various gradations. However, it is to be remembered that the extremely sensitive individual may at times suffer a severe injury which may be indifferently regarded by his physician or his family because of his known hypersensitivity to pain, nor should the stoic be overlooked because of his lack of complaints.

Tissue Sensitivity The somatic structures like skin and muscle are sensitive to pain when struck, pinched, cut, burned, crushed, inflamed or when otherwise injured. The pain is accompanied by tenderness to touch, pressure or manipulation and is referred to specific dermatomes.

Visceral pain, on the other hand, is induced only under five circumstances—hyperdistention, hypercontraction, interference with blood supply, traction upon the attachments, and injury to the parietal surfaces of the visceral coverings (pleura, pericardium, etc.). The lungs and the heart, if cut or otherwise injured, do not cause pain unless the parietal pleura or the pericardial diaphragmatic attachment is involved. Visceral pain is not associated with superficial tenderness.

Chest Pain

Chest pain may be of either somatic or visceral origin.

Somatic chest pain is chiefly of extrathoracic origin caused by irritation, injury or disease of the skin, breasts and muscles including the intercostal and scaleni muscles. It may also be caused by disease of the ribs, clavicles, shoulder joints, scapulae, and the spinal vertebrae or their intervertebral discs. Thoracic pain may at times also be caused by irritation or inflammation of the phrenic and intercostal nerves, and it occasionally may be transferred from an inflamed abdominal wall. It should be emphasized that the one thing all types of somatic pain have in common, irrespective of the etiology and clinical signs, is segmental tenderness, which may be superficial or deep.

Visceral chest pain may be of intrathoracic origin, or it may be referred to the chest from the abdominal viscera. The intrathoracic visceral "chest pain" may be caused by disease of the heart, the aorta,

* Clinical Professor of Medicine, Jefferson Medical College, Philadelphia, Penna.

the lungs and of some of the mediastinal structures. These do not give rise to segmental tenderness. However, segmental tenderness associated with chest pain is found in affections of the parietal pleurae, the lower portion of the pericardrum and the diaphragmatic pleura, and in certain diseases of the mediastinum. Referred pain from the abdominal viscera is caused by those organs lying in close proximity to the diaphragm such as the stomach, the upper colon, the pancreas, the liver, the gallbladder, the spleen, the adrenals, and the kidneys.

Diagnosis of Chest Pain—The diagnosis of acute chest pains often has to be made quickly and under trying circumstances. The doctor is called in a hurry at any hour of the day or night, rain or shine, or the patient may barge into the office or home at any time (in either case the complaint is "severe or acute chest pain"). Here you have before you a critically sick person, or at least one who thinks that he is critically ill, and you are expected to make the diagnosis on the spot and institute proper treatment or at least give relief. The diagnosis made under these circumstances is only a "tentative diagnosis."

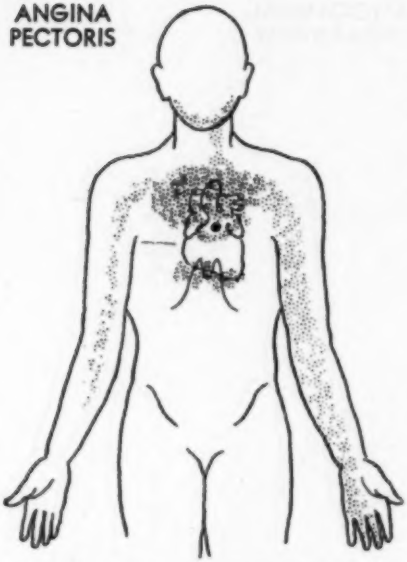
A more accurate diagnosis is made after the acute emergency has passed and the physician has had time to think more clearly and has had the opportunity to observe the patient more closely and to employ various diagnostic aids such as the electrocardiograph, the x-ray, blood studies and other procedures. The diagnosis thus made is the "final diagnosis". Unfortunately the final diagnosis is too often made by the pathologist. Of the two types of diagnoses the emergency one is of greatest importance; under trying circumstances more mistakes are made by carelessness or excitement than by want of knowledge.

I want to reiterate what has been so often stressed—that a good history is of prime importance. One need not waste too much time on a minute history when the patient is in great pain; the salient points of the history can be obtained while preparing the analgesic. A few questions are in order such as—when did the pain start; what were you doing at the time it began; has it gotten worse since its onset; just where is the pain; does it also hurt elsewhere? What kind of pain is it; what aggravated it? At the same time a rapid examination without disturbing the patient too much is made of the heart, the lungs and the abdomen. When the distressing pain is relieved, it is well to reassure the patient and the family and to make them feel that you are master of the situation (however, if the patient is moribund, do not hesitate to call for help). After the patient and the family have been quietened, only then should a searching and complete history be taken, particularly of previous diseases, previous attacks, conditions that precipitated this attack, and the family history, etc. During the examination it is well not only to auscultate the patient, but also to palpate, especially for local tenderness. As far as inspection is concerned, this, of course, is done from the moment the physician enters the sick room, or the patient enters the office.

Differential Diagnosis—Since a diagnosis is often missed by not thinking of the various diagnostic possibilities of the case when one is under mental strain during acute emergencies, I shall therefore briefly review the more prevalent diseases that are responsible for acute chest pains.

Angina Pectoris This literally means chest pain. However, a definite syndrome is recognized by this term. It is characterized by a definite type of chest pain.

The retrosternal pain is of varying intensity, ranging from moderate oppression to severe constrictive pain, halting the individual in his tracks. The pain may be referred to either arm, more often to the left arm, and travels downwards, often



Indicated pain areas. In all the illustrations in this article, the large dots show the site of the origin of pain; heavily shaded area indicates intense pain and lightly shaded area indicates referred pain.

reaching the fingers. It may also be felt in the neck, lower jaw, or in the scapular region. The onset is usually during walking (particularly uphill, against the wind, or soon after a meal), or during any physical or mental stress.

Duration—The pain may continue for from one second to fifteen or twenty minutes, the average being one to three minutes.

Frequency—An attack of pain may come on several times a day or less frequently, depending on provocation.

Etiology—The pain is brought about by an inadequate coronary blood supply to the myocardium when under stress, causing anoxia, which according to some investigators favors the development of metabolites; these are believed to be responsible for the pain. The myocardial blood supply may be interfered with by: (a) coronary sclerosis due to atheroma, or hypertension; (b) extreme hypotension; (c) arteritis due to rheumatic fever, syphilis, or periarteritis nodosa; (d) pronounced cardiac hypertrophy where there are fewer vessels to the unit of muscle; (e) severe anemia which interferes with myocardial nutrition; (f) pronounced mitral stenosis and aortic valvular disease; (g) and also by coronary artery spasm.

In massive cardiac hypertrophy due to aortic regurgitation or to other causes, angina pectoris may come on during sleep, and is relieved when the patient sits up or stands up. The cause of the pain, I believe, is due to ischemia of the myocardium which is brought about in the following manner. The heart, because of its heavy weight, gravitates toward the side on which the individual rests, thereby bending the arch of the aorta into an acute angle, causing partial obstruction of the mouths of the coronaries, which interferes with the free entrance of blood into the coronary arteries. In such cases when the patient sits upright or stands, the heart drops back into its normal position; the aortic arch unbends and blood again enters freely into the coronary arteries, thus relieving the myocardial ischemia and stopping the anginal pain.

Local tenderness is absent over the pain areas.

Clinical Findings—During an attack, the temperature remains normal; the blood pressure is unaffected; the leukocyte count is not elevated; the sedimentation rate is normal; the electrocardiogram does not show any recent specific changes unless there is coronary sclerosis or an underlying myocardial condition due to other causes. Nitroglycerin or amyl nitrite stops or shortens the attack.

Generally there are no complications, though coronary thrombosis may eventually supervene.

Myocardial Infarction (coronary thrombosis)

Pain—The retrosternal pain may be of moderate severity, or of extremely agonizing character, at times causing uncon-

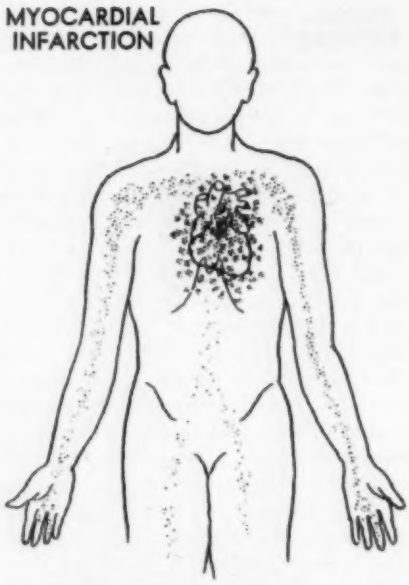
sciousness or sudden death. The character of the pain is that of severe constriction, or oppression accompanied with a boring sensation. It resembles angina pectoris except that it is more severe and of longer duration.

Reference—The pain is referred to either or both arms, traveling down along the arm often to the fingertips, and occasionally to the lower extremities.

The onset generally occurs when the patient is at rest, though it may occur at any time.

Duration—When unrelieved by narcotics, the pain may last from half an hour to several hours or days. The pain is seldom, if ever, relieved by vasodilators.

Frequency of Attacks—There may be only one attack, or several attacks may occur during the first six weeks, or a second or a third attack may occur within one to twenty years after apparent recovery.



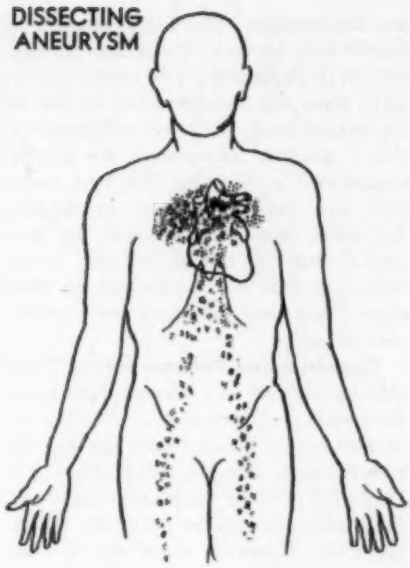
Etiology — Myocardial infarction is caused by acute occlusion or thrombosis of a small or of a large branch of a coronary vessel or of one of the main coronary arteries.

Symptomatology—Aside from the retrosternal oppressive pain, there is shock, cyanosis, sometimes sweats; the pulse rate may be fast, usually over a hundred per minute, or it may be unusually slow—40 to 60 per minute; there may be cardiac irregularities such as extrasystoles, auricular fibrillation, and, at times, heart block. The heart sounds may be sharp, loud but unsustaining; more often they are weak and hardly audible; occasionally there may be reduplication of the first or second sounds, or there may be gallop rhythm. The pulse is easily compressible. The blood pressure may remain at its usual level for the first twelve hours, or it may show a drop from the start. There is often vomiting. Palpable tenderness over the precordium is absent.

Subsequent Findings—Within twenty-four or thirty-six hours after the onset there is a rise in temperature; some leukocytosis with an increase in the neutrophiles, and a change in the sedimentation rate. The blood pressure may fall to an extremely low level. The electrocardiogram may then show definite evidence of a posterior, anterior or septal infarction. In about 4 per cent of the cases, there are no pathognomonic electrocardiographic changes. A friction rub may appear over the lower sternal region or near the apex.

Complications—Emboli secondary to mural thrombi may lodge in the lungs, brain, or kidneys. Congestive failure may prove fatal. Myocardial infarction occurs twice as often in men as it does in women.

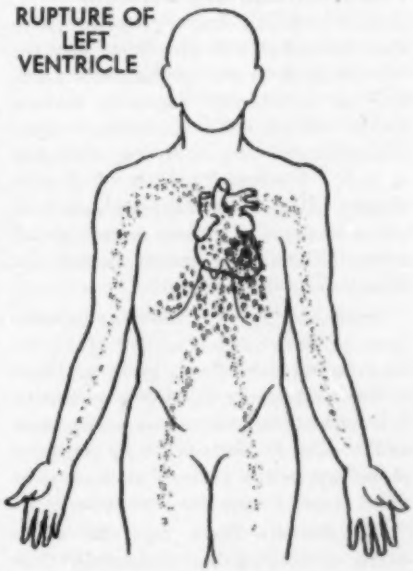
Dissecting Aneurysm The suddenness of the onset and the character of the pain often resemble myocardial infarct. However, dissecting aneurysm usually occurs in elderly arteriosclerotic persons and the attack as a rule occurs during some type of physical exertion. The pain is severe and excruciating, felt either over the upper part of the chest, or the entire



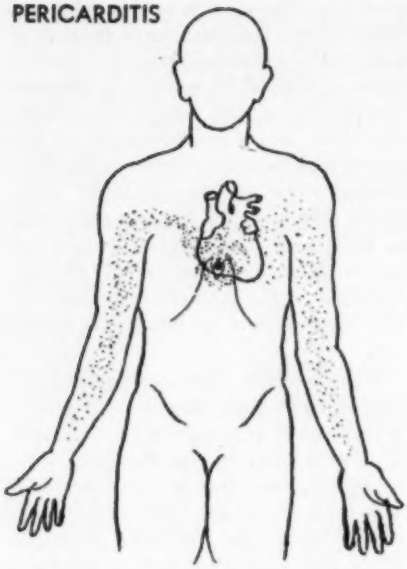
chest, and is referred to either or to both arms, or to the abdomen, and occasionally to both lower extremities, depending upon the site of the aneurysm, and on which of the aortic coats that have ruptured, and also on the amount of blood extravasating or infiltrating between the coats of the aorta. The patient is usually in shock. A throbbing sensation is felt in the precordium, and there is some discomfort on swallowing. The blood pressure remains high in the arms but is low in the lower extremities. Tenderness can here be elicited by pressing over the sternum or in the epigastrium, depending upon the position of the aneurysmal rupture. Electrocardiographic changes are not pathognomonic. Death may occur at the time of rupture, or the patient may survive for some time. When in doubt as to the diagnosis, the patient should be treated as a myocardial infarct, because, in both conditions, the relief from pain, and the rest, are important.

Rupture of the Left Ventricle The signs here also resemble myocardial infarction. The onset is sudden, with precordial pain. The character of the pain is more like a crowding; it is not intense. There is, however, severe shock, dyspnea, cyanosis and a weak, rapid pulse. Death may occur within a few minutes or the patient may survive until the pericardium becomes over-distended with blood. During the distention, the dyspnea and cyanosis become increasingly more pronounced, and the patient feels as if he were choking. Aneurysm of the left ventricle usually results from a previous myocardial infarction.

Pericarditis There is usually a history of a preceding infection. Precordial pain is caused only when there is a pleuropericarditis, a pericardial diaphragmatitis, or when the pericardium is over-distended with fluid, pus or air. The pain is sharp and is aggravated by deep breathing. When the pericardium is over-distended, the pain is felt over the lower sternum and is transmitted to the inner surface of the arm. In the presence of free fluid or air, the apex beat is displaced upwards. There is a sense of intrathoracic crowding, ac-



PERICARDITIS



companied by dysphagia, dyspnea, and often by hiccoughing. The physical signs and the x-ray examination will easily detect the presence of pericardial fluid.

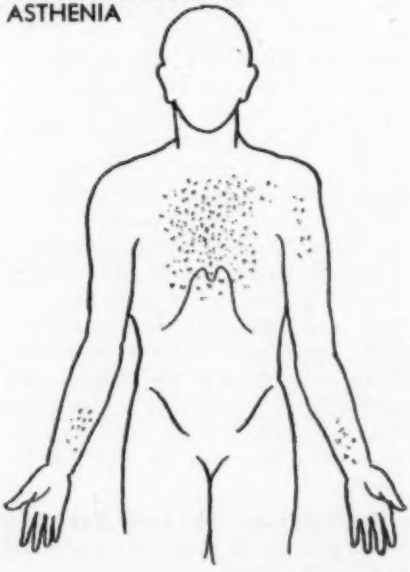
Neurocirculatory Asthenia so-called soldier's heart) Cardiac instability associated with precordial ache occurs among those who are high-strung and have an imbalanced vegetative nervous system, who are either vagotonics, or sympatheticotonics, or possibly a combination of both. Precordial pain is often complained of by these individuals without any evidence of coronary or myocardial defect. There is frequently, however, a disturbed cardiac innervation.

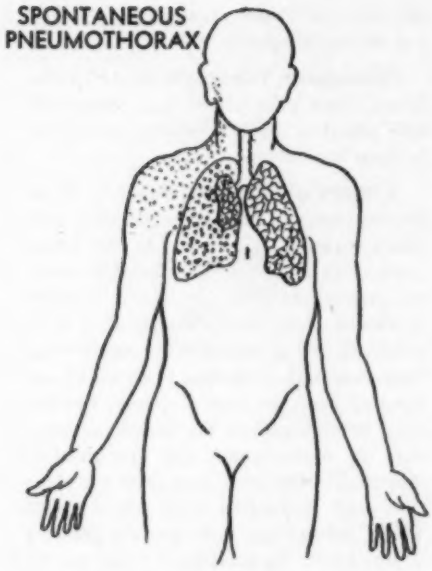
Precordial fulness or crowding is translated by these patients as pain which occurs during excitement, exertion, fright or fear, and during digestive disturbances. It is found more often among young males and females, particularly during the stages of puberty, often premenstrually, and in older women during the menopause.

Examination.—There may be tachycardia or bradycardia; occasionally there are extrasystoles. The blood pressure is usually low, between 80 and 110 systolic, and 60 to 70 diastolic. *The eyelids quiver when shut;* the temperature is usually at low normal level; the blood sedimentation rate is normal; tender areas are greatly exaggerated by pressing over bony structures and over the sternum. Psychotherapy often temporarily relieves the precordial pain. It should, however, be remembered that any psychoneurotic, even when young, may develop a true myocardial infarct.

Spontaneous Pneumothorax There may be a history of a previous lung infection such as tuberculosis, pleurisy, or chronic cough. Occasionally spontaneous pneumothorax may occur as a result of a congenital bleb or lung abnormality. At times no cause can be found for its appearance. It usually occurs during some type of exertion such as coughing, laughing or straining at some laborious task. The pain occurs spontaneously in either side of the chest; it is sharp, cutting and there is a sense of intrathoracic crowding.

NEUROCIRCULATORY ASTHENIA





expanding, or of bursting open.[7] The patient appears anxious, is dyspneic and may be cyanotic, or he may be in shock. There are no respiratory excursions on the affected side. The trachea and mediastinal structures are displaced towards the opposite side. The apical impulse, if at all visible, is also displaced to the opposite side. On palpation there may be supraclavicular or intercostal crepitation. Percussion will yield a hyperresonant note on the affected side. If total unilateral pulmonary collapse is present, the breath sounds are absent and a positive coin test can be elicited.

Mediastinal Affections (mediastinal tumors, mediastinal emphysema) Mediastinal inflammation may cause sufficient chest pain to be confounded with angina pectoris.

Mediastinal tumor, if primary, such as sarcoma, will cause pain retrosternally which is nearly constant, some difficulty in deglutition and an irritating cough.

Mediastinal emphysema, if spontaneous, will cause substernal pain and retrosternal fulness which are referred to the scapulae; there is tenderness on pressure in the upper intercostal spaces close to the sternum, and muscle spasm in the upper interscapular region. On auscultation there is found a peculiar crunching sound which is often heard along the left border of the sternum synchronously with the heart beat. Occasionally air crepitation may be felt in the upper intercostal spaces close to the sternum.

Any space-taking lesion or substance within the mediastinum will produce either the upper or the lower mediastinal syndrome, depending upon the portion of the mediastinum suffering compression.

Upper mediastinal syndrome is characterized by sharp oppressive pain at the base of the neck, or in the upper sternal region, hoarseness, persistant cough, dyspnea, dysphagia, cyanosis over the upper chest and neck (the so-called Stokes's collar), venous distention, and occasionally retrosternal adventitious sounds, such as crunching, crepitation or friction.

Lower mediastinal syndrome will show evidence of compression of the esophagus, the inferior vena cava, the hepatic veins, and the heart. There are dysphagia, enlargement of the liver, ascites, distended veins over the abdomen and lower extremities, edema of the legs and a higher blood pressure reading in the lower extremities than in the upper extremities.

Pulmonary Infarction If a large embolus blocks one of the main branches of the pulmonary artery, it will cause pulmonary collapse, intense chest pain, dyspnea, pulmonary edema, cyanosis, shock and death in a few moments.

When a smaller branch becomes occluded by emboli or by infarction, such as is found in cases of bacterial endocarditis, auricular fibrillation, phlebitis or phlebothrombosis in the legs and myocardial infarction, it may cause an array of symptoms depending upon the size of the hemorrhagic infarct, its location, and the

presence of collateral circulation.

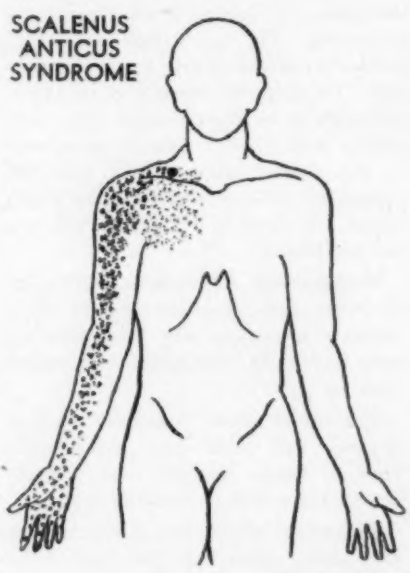
Among the symptoms that may occur are sudden pleuritic pain radiating to the shoulder of the affected side, severe chest pain, tachycardia, dyspnea, profuse perspiration, cyanosis, various degrees of collapse, and cough with blood-stained expectoration. There is a rise in temperature and leukocytosis. The appearance of jaundice is a sign of great danger. The examination of the chest may reveal an area of partial consolidation, numerous rales, and bronchovesicular breathing. At times chest signs are vague. The x-ray examination will detect large areas of pulmonary atelectasis and large areas of infarction when present. A small area may appear as a hazy, concentrated shadow. Small infarcts may give rise to symptoms such as those mentioned but may not be detected by either physical signs or x-ray.

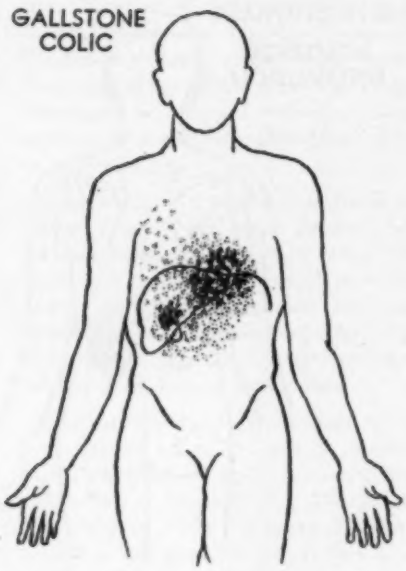
Pulmonary Edema The pain is not sharp, but there is a distinct sense of oppression, as if there were a heavy weight pressing upon the chest, accompanied by severe dyspnea with cough and expectoration of bloody, thin, frothy material. It is usually found in hypertensive cardiac disease, or myocardial infarction. In those suffering from severe myocardial damage, it may come on suddenly after mild exertion or during sleep, brought on by frightening dreams. The history of the underlying condition is of diagnostic importance.

Acute Pleurisy The pain of acute pleurisy is usually no diagnostic problem. A stitch-like pain in the chest aggravated by breathing is diagnostic of an inflamed pleura. However, the causes of pleuritis are many. It may be the result of tuberculosis, carcinoma, fractured rib, sternum or spine, pneumococcic pneumonia, mycotic infection, silicosis, emphysema, lung abscess, pleurodynia, multiple myeloma, periarteritis nodosa, etc. Most of these conditions are identifiable by the history, the physical examination, x-ray studies, and other clinical and laboratory tests.

Pulmonary Tuberculosis seldom causes chest pain unless it is associated with pleurisy, dense adhesions, empyema, or bone involvement.

Tumors of the Lung Tumors such as fibroma, sulcus tumor, dermoid cyst, and Boeck's sarcoid as a rule do not cause acute chest pain. The pain usually comes on gradually; when the tumor is fully developed it is more like an ache or a crowding and is provoked by swallowing, deep breathing, coughing, or straining, depending upon the type of tumor, whether hard or soft, and on the amount of pressure it exerts upon the intrathoracic structures. The other symptoms and signs also vary depending upon the type of tumor, its location, and upon the pressure it may exert. In some cases, there may be cyanosis with distended veins; in other cases there may be cough and hoarseness; or there may be protrusion of the sternum, or of some of the ribs. The roentgenogram will easily detect its presence.





Malignant Tumors — Bronchogenic carcinoma is usually associated with chest pain, cough and with bloody expectoration.

Carcinoma of the pleura, endothelioma, is always accompanied by severe pleuritic pain before the appearance of fluid. The pain becomes more severe with the development of metastasis to the bony structures. A valuable sign of pulmonary carcinoma is something that sounds paradoxical, namely, absent or greatly diminished tactile fremitus with increased vocal resonance.

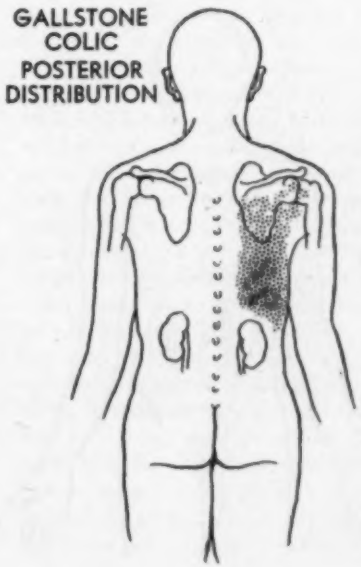
Aneurysm of the arch of the aorta, when large, will cause only a sense of crowding in the chest. Severe pain will occur only when erosion of the sternum, ribs or spinal vertebrae takes place.

Scalenus Anticus Syndrome or cervical rib—The pain here is caused by compression of the subclavian artery and some of the cervical plexus nerves by the scalenus anticus muscle near its insertion in the anterior third of the first rib. The pain is often most severe during the night when the arm is compressed. It is usually felt in the shoulder and travels down the arm and often causes tingling in the finger tips. At times the pain is so severe that the entire upper part of the chest on the affected side is the seat of referred pain. The diagnosis is easily made by palpating the inner one-third of the suprascapular region. There is spasticity and extreme tenderness to pressure and there are other classical signs.

Intercostal Neuralgia, Neuritis, and Herpes Zoster The pain is usually superficial and confined to a definite area which is tender to touch; it is aggravated by deep breathing and by certain movements. The pain in herpes zoster, even before the appearance of the characteristic rash, is sharp, burning and lancinating.

Arthritis, Arthralgia, or synovitis, when affecting the sternal or spinal articulation of the ribs, will cause sharp or dull pain over the affected area. The pain is aggravated on motion, on breathing, and on pressing.

Disease of the Spine, Ribs or Sternum such as tuberculosis, osteomye-



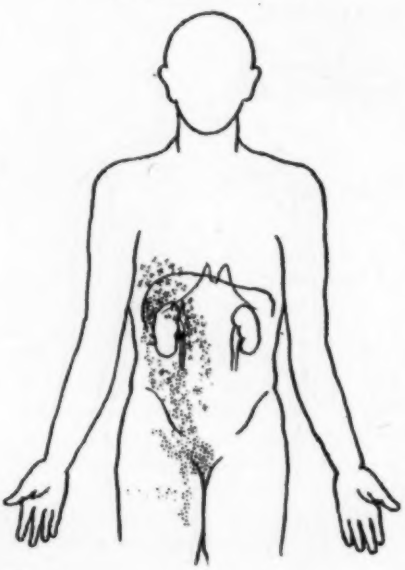
litis, malignancy, multiple myeloma, or erosion of these structures by aneurysm, by disease or by trauma will cause pain which is aggravated on breathing and on motion. There is also extreme tenderness on palpation.

Diaphragmatic Pleurisy and Subdiaphragmatic Abscess In these conditions the pain is felt in the lower thorax; it may be dull in abscess and sharp in pleuritis. It is aggravated by deep breathing, coughing, sneezing, straining, and by abdominal distention. There is restricted respiratory movements of the affected side. Fluoroscopically the hemidiaphragm is immobile. The roentgenogram will show an elevated diaphragm on the affected side. Superficial palpation may cause pain, while immobilization will relieve it to some extent.

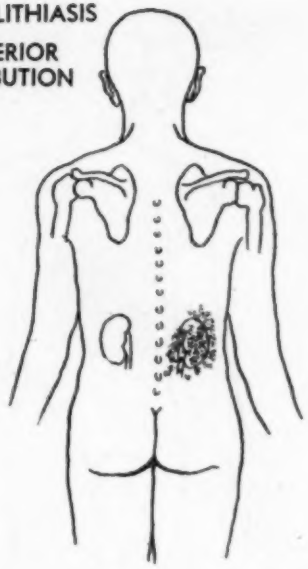
Referred Pain Pain in the chest may be referred from inflammatory disease of the abdominal wall and peritoneum, also from cholelithiasis, nephrolithiasis, pancreatitis and pylorospasm.

Gallstone Colic — (cholelithiasis). A

NEPHROLITHIASIS



NEPHROLITHIASIS
POSTERIOR
DISTRIBUTION



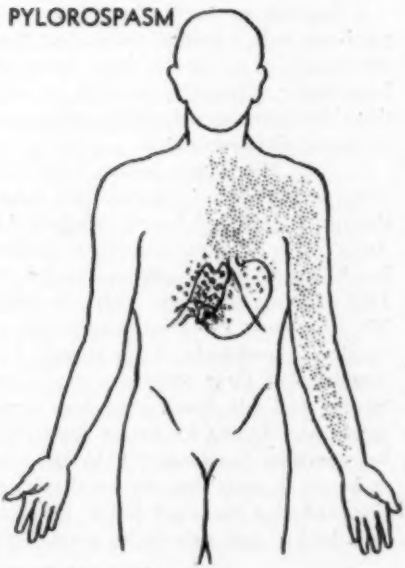
stout woman, past the age of 40 years, suddenly awakened during the night with acute pain in the chest, is indeed a diagnostic problem, particularly so if it is the first attack. The question between gallstone colic and coronary thrombosis is often difficult to decide. However, in gallstone colic, while the patient is all excited, impatient and non-cooperative, pressure over the gallbladder region may intensify the pain. There is rigidity of the upper abdomen, the pulse may be slow, and shock is not pronounced. A hypodermic injection of a small dose of morph. sulf. may quieten the patient sufficiently to obtain a coherent history. At times both myocardial infarct and gallstone colic may occur in the same patient.

Nephrolithiasis may rarely be mistaken for intrathoracic disease. The pain of kidney stone is intense and while it is usually felt in the kidney area and is referred to the hypochondriac region and downwards towards the genitals and the inner aspect of the thigh, it may occasionally also be felt in the chest and therefore may resemble myocardial infarc-

tion. However, the pain of myocardial infarction presents a different picture. A diagnostic problem occurs when, during the course of myocardial infarction, venous thrombosis or femoral emboli, causing severe pain in the lower extremities, occur as a complication.

Pancreatitis and perforating gastric or duodenal ulcer may cause intense chest pain accompanied by shock. However, the abdominal rigidity, the type of pain, the silent abdomen, the aggravated pain, the tenderness on palpation, and the other characteristic clinical findings are sufficiently diagnostic of pancreatitis.

Pylorospasm, due to gallbladder irritation, spastic colon or gastritis usually causes pain, fulness and expansion in the epigastrium or retrosternally. The pain is often referred to the left upper chest and down the left arm. If this occurs in a person suffering from neurocirculatory asthenia with low blood pressure, it raises the question between pylorospasm and coronary artery spasm or perhaps myocardial infarction. Relief on belching, borborygma and lack of signs of circulatory impairment suggest pylorospasm.



A discussion of a few cases will illustrate the difficulty of the differential diagnosis of chest pain. Some are my outstanding mistakes, and others my lucky guesses.

Case 1. One day, at about 1 P.M., just as I was ready to leave my office, a Mr. P., complaining of severe chest pain, was brought to my office by his brother. The story was that while in a manufacturing plant that morning he was seized with severe pain somewhere in his chest. He went to see the doctor who was treating him for some digestive disturbance. The doctor scolded him for his dietary indiscretions and gave him something to relieve his pain. He went back to his shop and at 12.30 P.M. that day, the pain returned with increased severity. He called up his doctor's office and found that he had gone for the day; therefore Mr. P. was brought to my office. The man complained bitterly of pain in his chest or upper abdomen; he did not know which. He wanted me to give him something that would make him belch up some gas. He stated that the gas was pressing against his heart. He was ashen gray and gasping. I gave him a little aromatic spts. of ammonia and peppermint water, which made him belch and vomit; he thought he felt better. On examination his pulse was rapid, the heart sounds appeared fairly good but rather hurried; there was no murmur and no arrhythmia. The abdomen was distended but there was no epigastric tenderness. The blood pressure was 90/74. When I mentioned the low blood pressure, he told me that his pressure had always been low. While examining him, his pain returned with greater severity. I then gave him a hypodermic injection of morphine sulf. gr. ¼ and atropine sulf. gr. 1/150, made him lie down and instructed his brother to call a cab to take him to a hospital or to his home. My diagnosis was either pylorospasm or gallstone colic.

When his cab arrived, his pain was gone. As he left my office to get into the cab, he suddenly dropped dead on my doorstep. The final diagnosis by autopsy showed a large recent myocardial infarct. The heart also showed evidence of a number of old small infarcts. His history of digestive trouble and of always having had low blood pressure threw me off guard. His family still believes that the hypodermic injection I had given him had killed him.

Case no. 2. A young man of 32 years came to my office complaining of digestive pain that he had had off and on for several years. That morning he developed severe pain in the upper abdomen or chest; he could not localize it. To relieve his pain he made himself vomit by sticking his finger down his throat, a procedure he had often followed. This time his pain became more severe. When he came to the office because of his pain, he could hardly sit still during the examination. I found that he had a loud systolic murmur and that his blood pressure was low. When I mentioned his heart, he stated that he had had rheumatic fever during childhood, and that he was told about a murmur and low pressure. However, he appeared to be in shock and his restlessness indicated severe discomfort. I gave him a hypodermic of morph. sulf. and suggested that he go to a hospital at once and made arrangements for his entrance to the hospital. Instead of going to the hospital he went to a restaurant and ate a full meal. As he approached the cashier's desk he dropped dead. My mistake was that I did not keep him in the office until the ambulance came for him, but permitted him to leave the office presuming that he would pick up a passing cab. The autopsy showed a ruptured cardiac aneurysm.

Case 3. Mr. L. was brought to see me in 1945 at the age of 21 years, complaining of a conglomeration of heterogeneous symptoms such as headache, dizziness, indigestion, belching, epigastric and abdominal pain and fulness after meals, chest pain on walking, cardiac palpitation, sweating of his hands and feet, weakness, exhaustion after the least effort, insomnia with frightening dreams, etc. On examination, I found him to be thin, weighing 108 lbs. and measuring 5 ft. 7½ in. in height. Eyes, ears, nose and throat were negative.

Chest.—Lungs were normal. The heart was not enlarged; the cardiac apex was beating violently against his chest; heart sounds were loud; there was no murmur; the heart rate was 70 while lying down, but rose to 90 after walking up a short flight of stairs; the rhythm was regular.

Blood pressure was 100/60.

The abdomen was scaphoid with some distention near the pelvis, and there was spasticity of the colon.

The liver, spleen and kidneys were not palpable.

His tendon reflexes were greatly exaggerated.

His hands and armpits were drenched with perspiration.

Urine was normal.

Blood count did not show any anemia or other abnormalities.

A diagnosis was made of vagotonia with psychoneurosis. Several days after this examination I received a letter from his local doctor acquainting me with the fact that this patient as well as his mother are confirmed psychoneurotics.

In 1946, Mr. L. was inducted into the Army in spite of my report of his condition to the local draft board. While in the Army he spent nine months in various hospitals and was finally discharged in 1947 as a psychoneurotic. Early in 1948, Mr. L. came to the office complaining as usual of a multitude of symptoms. His complaint of these symptoms was more intense and his lamentation was more persistent. Among his varied complaints he repeatedly mentioned that he had had, as he put it, more than the usual indigestion, and that the night before he came here he had real pain in his chest. "Of

course," said he, "I had some whiskey and a few hot dogs." He stated that he was sick but that no one would believe him.

On examination I found his temperature to be 100 F. His pulse was rapid, 96 per minute; the respiratory rate was increased. The apical impulse, in spite of the elevated temperature, was not as forceful as it had been on previous examinations. The heart sounds did not appear unusual. His leukocyte count was 12,000. I took an electrocardiogram with the idea of convincing him that it was not his heart that caused the pain. To my great surprise I found that he had distinct evidence of a posterior coronary occlusion. How long he had had it, I could not tell, for he had always complained of chest and upper abdominal pain. He had cried "wolf" once too often. I immediately sent him to the hospital where he remained for eight weeks until the temperature, leukocytosis and sedimentation rate became normal. However, the electrocardiogram has not changed since the one taken at the office. He still complains of all the varied symptoms as he did for many years before.

Case 4. Is that of a doctor who had had coronary thrombosis with myocardial infarction twelve years previous to his present difficulty. He was suddenly seized with severe thoracic discomfort so that breathing was difficult; with that he had pain in his left chest. Within six hours after the onset his temperature rose to 103° F.; his respiratory rate was rapid and he developed a cough which brought up blood-stained expectoration. I was asked to see him thirty-six hours after the onset. The doctors present gave me the following description of the physical findings elicited that morning. The heart showed auricular fibrillation. The pulmonary findings were a patch of incomplete consolidation in the upper left lung and a similar patch at the right base posteriorly. The liver was enlarged to about 3 cm. below the costal margin, and the conjunctivae were somewhat jaundiced. The electrocardiogram showed evidence of an anterior coronary occlusion. There was a controversy as to the diagnosis among the three physicians—the family physician and two consultants. I was called in as a deciding factor. One consultant thought it was another coronary thrombosis with pulmonary infarction; the other consultant was of the opinion that it was a primary pulmonary infarction brought about by his fibrillation, believing that a clot in the right auricle might have precipitated the emboli. He argued that the recent electrocardiogram was identical with those taken annually for the past twelve years, following his first myocardial infarction, and that the chest discomfort claimed by the patient was not typical of coronary occlusion since the patient was at no time in severe shock. Any symptoms of shock exhibited by the patient were probably caused by fear of another thrombosis. The family physician, on the other hand, had treated him for pneumonia. It was a difficult decision to make. Judging from the history and the physical signs thus far obtained, each of the physicians had a valid reason for his opinion. It might be another coronary infarct with pulmonary infarction; it could be pulmonary infarction without coronary thrombosis; and it could be pneumonia, or it might be all three in one. A decision was important because of treatment. Should we use anticoagulants or not?

The physical examination of the patient substantiated in the main the findings given me. But there was something about the patient that just did not impress me as an acute coronary case. The patient was in an oxygen tent; his respirations were rapid and shallow; he had a flush on his cheeks; the skin was dry and hot; the heart was fibrillating but there were no signs of decompensation; the lung lesion at the left upper lobe had constant numerous moist rales and the right base was consolidated, having only a few subcrepitant rales; there was bronchial

breathing with increased tactile and vocal fremitus, and he had considerable tenderness on pressure near the diaphragmatic insertion on the right side. He had a harassing cough and brought up scant, viscid, blood-stained sputum. His blood pressure was as reported, namely, 140/90. On inquiry if his blood pressure had remained high or low since his previous illness, his answer was, "No, I have had a blood pressure of about 130 and somewhat above for the past ten years." Reviewing the history of his present illness, I asked if he had worked particularly hard on the day he took sick, and if he had treated any acute pulmonary conditions within the past week or two? "Yes," he said, "Do you remember the nasty weather we had two days ago; well, I was chilled to the bone when I got home, and instead of resting I had to run downtown again to get some penicillin for my youngster who had contracted an upper respiratory infection from my wife and two daughters who had a virus pneumonitis. First, one of my daughters developed the disease four weeks ago; then my wife contracted it; when she got better my other daughter caught it, and my son was next."

After we had retired to the consulting room, I stated that I agreed with the family physician. I believed it was pneumonia for the following reasons: a) a history of possible infection; b) the type of lesion at the right base; c) the racking cough with only blood-stained sputum; d) the high temperature; e) the type of chest pain; f) the palpable tenderness over the base of the right lung; g) and the sustained blood pressure thirty-six hours after the onset of symptoms. Only the family physician was convinced. However, it was our unanimous decision to send the patient to the hospital for more careful study. The final diagnosis was pneumonia. He recovered within 10 days after entering the hospital.

Case 5—Another similar case, also a doctor who previously had had a coronary thrombosis, developed almost identical symptoms to those just described, except that his rise in temperature did not appear until twelve hours after the initial chest pain; it was not over 100° F. He also had lung lesions but those were deep seated, and his present electrocardiogram differed from the one taken during his first illness. This patient did have a coronary occlusion with pulmonary infarction and he was jaundiced. He died within a week after the onset.

Case 6. This is the story of a patient aged 49 years, weighing 192 lbs. She was awakened during the night with severe upper abdominal or substernal pain, she did not know which. She had pain ranging from the sternum to the right scapula. The pain was intense; she rolled all over her bed and attempted to tear her nightgown as well as her chest. The only diagnosis possible at that time was "Pain." She was given ¼ gr. of morphine with 1/150 gr. of atropine hypodermically which had no effect. Fifteen minutes later she was given a second dose which apparently did not relieve her. Five minutes later she was given 1/100 gr. of nitroglycerin; this had an almost spontaneous effect; she was relieved. One hour later she vomited a large quantity of stomach contents and the pain returned. Nitroglycerin this time had no effect so she was given ½ gr. of morphine which gave her some relief. Her chief complaint, however, was continuous retrosternal pressure. She was known to suffer from hypertension and from gallstones. She had previously had several nocturnal attacks of colic that were relieved by narcotics. This attack was different. The pain was much more severe; she had pain not only in the sternum and right scapula but all along the right shoulder and arm. The following day she developed a temperature of 101° F. She was somewhat jaundiced and her blood pressure had fallen from her usual 220/112 to 110/70. She still had pain. She was in shock and her abdomen

was rigid. The question was did she have gallstone colic with perforation of the gallbladder, or did she have a coronary occlusion? That night (that is, the night following her first attack of pain) she developed another attack of uncontrollable pain and was rushed to a hospital. The surgical resident opened her up and removed a gallbladder filled with multiform stones. Subsequent electrocardiographic study showed that this lady also had an acute myocardial infarction. After a stormy convalescence she recovered. This proves that at times "fools rush in where wise men fear to tread", or "where ignorance is bliss, it is folly to be wise". It also illustrates that one has to bear in mind that gallstones and coronary disease may co-exist. It is difficult to say which this patient had first, an acute coronary attack, or gallstone colic, or perhaps both at the same time.

Case 7. Is that of a woman who complained that during the previous night she was awakened with severe pain in her left shoulder which traveled up the side of her neck and down the arm and in her chest. The pain had been excruciating and was still quite severe in the left shoulder, upper chest and arm. Examination failed to show any cardiac defect. The pulse was slow, the heart and electrocardiogram were normal. However, pressure in the suprascapular region near the neck caused severe pain. Other signs also showed her to have a scalenus anticus syndrome.

Conclusion While pain in the chest is a common symptom in many chest diseases, and in some of the abdominal conditions, and is the most trying symptom to the patient, the cause of such pain cannot always be accurately diagnosed by the presence of pain alone, as this is only one of the symptoms caused by disease. It requires observation, study, application and experience on the part of the physician to properly diagnose the various conditions responsible for such pain.

However, the real diagnostic problems are encountered among individuals who while suffering from one condition suddenly develop another condition that may simulate it. As instances—a person who has had many attacks of angina pectoris suddenly develops a coronary occlusion, or a person who has had numerous attacks of gallstone colic suddenly develops myocardial infarction; also a person who has had a previous attack of myocardial infarction, which has left him with auricular fibrillation, suddenly develops a pulmonary infarction. Such and many other combinations may occur and often tax the diagnostic ability of the most astute clinician. However, many mistakes can be avoided and lives saved if the physician will keep a cool head when faced with such emergencies and have in mind the diagnosis and differential diagnosis of the various conditions that may cause acute chest pain. It is of utmost importance that the physician should reassure the patient and do no more than is absolutely necessary at the time of the emergency. The relief from pain and discomfort during the acute emergency is imperative; urgent symptoms must be treated as they arise. However, corrective and curative measures are to be instituted after a thorough study of the patient and as soon as a positive diagnosis is made.

1905 Spruce Street

Appointments

Dr. Reed J. Rich of Montpelier and Dr. Warren B. Ross of Nampa have been appointed to six year terms on the Idaho State Board of Medicine. Dr. Ross has previously served on the Board. Dr. Rich succeeds Dr. Harwood L. Stowe of Twin Falls.

Eczema

This summarization attempts to cover the essential therapeutic information on the subject and is designed as a time-saving refresher for the busy practitioner.

Eczema is an acute, subacute or chronic inflammatory reaction of the skin characterized by erythema, papules, and vesicles with varying degrees of infiltration, oozing, crusting, scaling, and lichenification.[1,2] Some writers favor avoidance of the term "eczema" since it has been given widely different meanings by different people[2] or because it is considered as describing a clinical reaction rather than a complete scientific diagnosis.[3] These writers favor the use of the term "eczematous dermatitis." The cause of clarity is not furthered by the appearance in the literature of a wide variety of adjectives with the term "eczema." These adjectives, for the most part, merely emphasize the predominating characteristic of the lesion present.

This form of dermatitis is the one most frequently encountered. It affects individuals of both sexes and of all ages equally.[2]

It is regarded as indicating a hypersensitive condition of the skin because of the appearance of areas of eruption, similar to the original, more or less symmetrically distributed over the body.

Etiology The cause of eczema is highly variable and in many cases unknown. Some of the obvious causes are contact with irritants or vapors of irritants, exposure to thermal or actinic rays, and friction or pressure. Dietary factors alone are not considered to play a principal part in the condition, but substances in the body which may be inhaled or ingested or are products of disordered metabolism may be provocative factors.

Predisposing and aggravating factors are debility, abnormally dry or extremely oily skin, a fair complexion, maceration of the skin, heat and cold, emotional factors, focal infections, and, to a limited extent, heredity.

The patient's history should be taken carefully on several occasions in an attempt to throw light on causative factors. All activities, such as occupation, hobbies, and those in the home, should be considered, especially with regard to possible contact with irritants.

Clinical Appearance Usual symptoms of the condition are erythema, superficial edema, and an inflammatory, cellular infiltration which leads to the formation of papules, vesicles, exudation, crusts and scales.

In the acute stage, there is considerable oozing and crusting. The skin may be scarlet in color.

In the subacute stage, there is more infiltration and scaling.

In long standing cases, cracks and fissures appear along the lines of flexion. There is a greater degree of lichenification and infiltration. The skin may be dull red or purplish in color and may be toughened and thickened.

Lesions are commonly found on the hands, feet, legs, ears, and face but may appear anywhere on the skin surface.

An intense itching, which is worse at night, accompanies the condition or the

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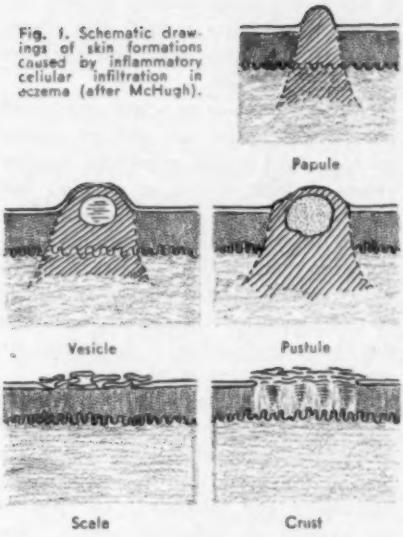

Fig. 1. Schematic drawings of skin formations caused by inflammatory cellular infiltration in eczema (after McHugh).

patient may complain of a burning or smarting sensation. Scratching may give rise to bloody crusts or secondary infection.

According to the predominating type of lesion present, eczema may be classified as follows:[1]

Erythematous—Bright red and tense blotches appear which may coalesce into ill-defined patches. The erythema is usually broken up by areas of normal skin and there is seldom any constitutional disturbance (distinction from erysipelas.) The color fades gradually into the surrounding skin. This condition is most common on the face and in individuals exposed to wind, weather, and sun. When the eyelids are much affected, we have evidence of proximity or contact with external irritants such as chemicals.

Papular—Rounded or acuminate papules appear which may or may not be on an erythematous base. There is intolerable itching. The lesions may become flat and shiny by rubbing. This type shows a predilection for the extensor aspects of the arms and thighs.

Vesicular—Intense edema leads to the formation of numerous vesicles on a reddened base. These rupture easily; serous fluid exudes and coagulates to form sticky, yellowish crusts. This condition may occur on any part of the skin. It is commonly found on thin epidermas, the flexures of the joints, the forearms, and the scrotum.

Lichenified—Lichenification is evidence of a long-standing condition. The skin is thickened and is red or brown in color. The natural lines of the skin are exaggerated and the area feels unusually tough and dry. The lesions are closely-set, flat, polygonal papules which gradually fade into the surrounding skin.

Pustular—This may result from the secondary pyogenic infection of a preceding phase or "sensitization" in the course of a pyogenic infection. Large, yellowish, soggy crusts are found. When removed, they reveal a bright red, shiny base. Usual sites are the scalp, face and legs.

Discoid or Nummular—This is a localized variety in which are found moderately well-defined plaques of different sizes which frequently give the impression of being raised above the surrounding skin surface. The plaques are usually erythematous and predominantly vesicular. The lesions appear suddenly and simultaneously and do not increase in size. The upper limbs are principally affected, the trunk and legs less frequently.

A diagnosis of eczema may be made after considering the clinical appearance of the eruption and accompanying symptoms, the history of the patient, the relapsing nature of the condition, and its response to treatment.

Differential Diagnosis The multiformity of the lesions, the usual tendency toward "weeping," the accompaniment of intense irritation, and the great inclination to relapse will usually distinguish eczema from other skin diseases. Distinguishing characteristics of a number of common skin diseases follow:

Erythema multiforme is a bilateral and

symmetrical eruption of the face and the extensor surfaces of the hands and forearms; the palms, soles, and the mucous membranes are also affected. The lesions are polymorphous, but are usually plaque-like erythemas having a smooth, velvety feel. The pathognomonic lesion, when present, is a target lesion in which one pinkish ring is found within another.

Exfoliative dermatitis is a universal dry eruption characterized by much scaling and little infiltration.

Lichen planus is characterized by the presence of smooth, flat-topped, burnished papules having a mauve or violaceous color. It is usually found on the flexural surfaces of the forearms and wrists, the inner thighs, shins, ankles, waist line, back of the neck, and the penis.

Intertrigo is a chafed condition of the thighs, breasts, groins, toes, and the axillary spaces, especially in obese individuals. Repeated friction and the retention of sweat causes the parts to become inflamed, glazed, or macerated.

Psoriasis is a papulo-squamous eruption in which are found sharply defined dry patches of erythema covered with silvery scales. Elbows, knees, scalp and trunk are sites of predilection.

Pityriasis rosea is an acute, generalized disease. The lesions are pink or salmon colored, round or oval, superficial macules having a faint yellow or café au lait center. Because of its distribution, it is known as the "neck to knees" or "old-fashioned bathing suit" disease. A primary or mother patch appears in 60 per cent of the cases. A diagnostic feature is that the long diameters of the lesions are parallel to the lines of cleavage.

Seborrhoeic dermatitis is a disease in which are present yellowish orange, oval or round, ill-defined patches which are at first superficial, then become more inflammatory and infiltrated. The patches are covered by yellowish, greasy, non-adherent scales or a greasy crust. The more common sites of involvement are the scalp, the chest, the interscapular region, and the area behind the ears. When the scalp is involved, alopecia results.

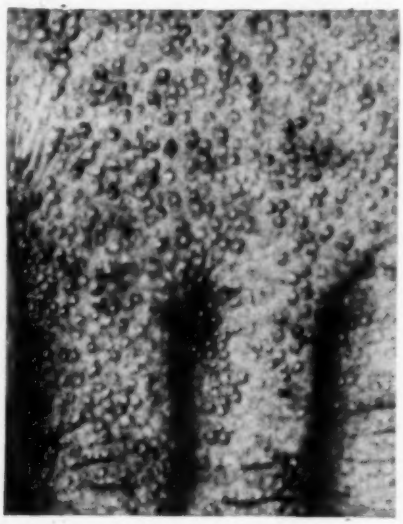

Fig. 2. Acute stage of eczema, showing edema and closely studded vesicles.

Fig. 3. Chronic stage of eczema, showing lichenification and cracking along the lines of flexion.

Scabies is a contagious disease characterized by nocturnal itching and by the presence of red, follicular papules and burrows. It is caused by the itch mite *(Sarcoptes scabiei)*. The finding of burrows and of the Acarus itself makes diagnosis clear. Scrapings may show also ova and eggshell moults.

Miliaria rubra (prickly heat) is an acute eruption which occurs in hot, humid weather. The lesions are discrete papules and papulo-vesicles, pinhead in size, having an erythematous halo. They are usually limited to the covered parts of the body.

Macular Syphilis is characterized by the presence of faint pink or red macules generally distributed on the trunk. Itching is absent. The location of a primary lesion and positive serology will confirm the diagnosis.

Patch Test If one or more specific substances are suspect, a patch (not scratch) test may be performed by placing the material, in solution preferably, on a piece of white linen about as large as a postage stamp. This is placed directly in contact with the unbroken skin and covered with an impermeable material. A control is prepared and both are left in place for 24 to 48 hours. The patient should be instructed to remove the patch at any time should irritation become intolerable. At the end of the test period the area is cleansed and the reaction noted. A positive test, indicated by the appearance of papules, is suggestive; a negative test is inconclusive. Delayed reactions sometimes occur in this test.

Treatment If a careful study of the history implicates a contact irritant or reveals the existence of exciting or provocative factors, these should be removed.

Management should be directed at affording some immediate general relief from irritation and providing physical and mental rest. Barbiturates and salicylates are effective. Care should be exercised in the use of bromides. Opium and its derivatives are contraindicated. Phenobarbital U.S.P., ½ to 1 grain t.i.d., will frequently relieve irritation satisfactorily.

℞ Elixir of Phenobarbital ℥ iv
sig. ʒ ii t. i. d.

(Note: Elixir of Phenobarbital contains ¼ grain or 15 mg. of Phenobarbital per teaspoonful.)

A smaller dose of barbiturate given throughout the day is preferred to a larger dose given at night only.[1] Proportionately smaller doses may be given to infants and children.

In the acute, vesicular or oozing phases, wet dressings should be used. These may

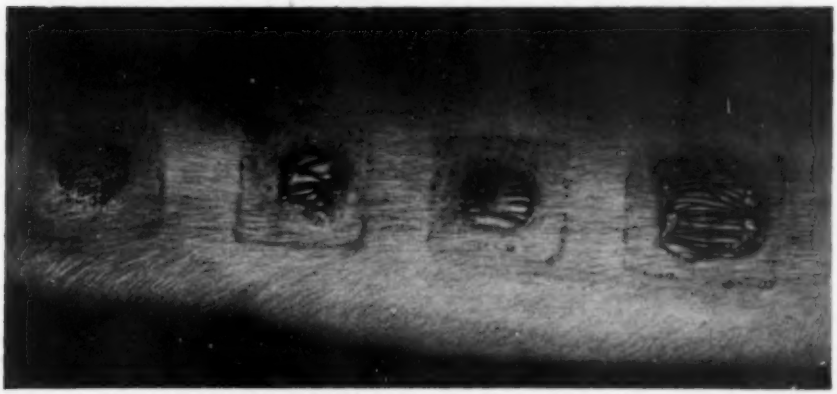

Fig. 4. Results of patch tests on forearm of patient hypersensitive to iodine. The concentrations from left to right were from ½, 1, 1½, 2 per cent iodine (after Becker and Obermayer).

be prepared from normal saline solution, aluminum acetate 1% to 3%, potassium permanganate 1:1000 to 1:10,000, or sodium bicarbonate.[1,2,3,4] Cornstarch may be used as a dusting powder. Crusts may be removed with warm oil.

℞ Aluminum Acetate Solution U.S.P. 250 cc.
Sig. Dilute as directed and apply as a wet dressing.
(Note: The official solution is approximately 5% in strength. Any desired concentration can be obtained by dilution with one or more volumes of water.)

In the subacute, less edematous phase, various emollients, protectives, and antipruritics may be used several times daily. Among the emollients and so-called "healing agents" are found preparations based upon fish liver oil,[5] boric acid,[5a] Ichthyol[6] (Ichthammol N.F.) in concentrations of 2% to 5%, and 15% to 25% ointments of a solution of the sodium salts of synthetic sulfo-oleic acids.[7] Ointments containing, in addition, varying amounts of zinc oxide, talc, calamine, and other similar substances are emollient and protective.[8] Calamine lotion U.S.P. and Lassar's Zinc Paste N.F. and similar preparations have also found use.[8a] Also used are ointments containing camphorated chloral,[8b] and benzocaine.[8c]

℞ Ichthyol 1.2
Lassar's Zinc 60.
Paste
Sig. Apply several times daily.

℞ Bismuth Subgallate 1.0
Coal Tar Solution 2.5
Hydrophilic Ointment
U.S.P. q.s. ad. 50.
Sig. Apply as directed

Antipruritic effect may be obtained by the use of ointments containing coal tar or various fractions from coal tar[9] with or without the addition of zinc oxide, starch, and other protectives.

In chronic cases, coal tar ointments, especially those containing 5% to 20%,[4] are indicated, as are also ointments containing, in addition, sulfur and salicyclic acid[10] or containing resorcinal monoacetate.[11]

Some benefit may be obtained by the use of antihistaminics locally and orally. Diphenhydramine Hydrochloride[12] may be given in a dose of 50 mg. three or four times a day.[1] It is also available as a 2% cream, for use three or four times a day. Tripelennamine hydrochloride,[13] orally in a dose of 50 mg. and locally in the form of a 2% ointment or cream, is used in a similar manner.[14,15,16] Phenindamine hydrogen tartrate[17] ointment gave results which were encouraging, particularly in the allaying of the itching of chronic cases.[18] It is also available in the form of a lotion. Chlorcyclizine Hydrochloride,[19] one 50 mg. tablet once daily; N, N-dimethyl-Ni-(2-thienylmethyl)-ethylenediamine hydrochloride (20), one 50 mg. tablet four times a day; pyranisamine maleate,[21] in tablets of 25 or 50 mg. two to four times a day; methapyrilene hydrochloride,[22] one 50 to 100 mg. tablet one to four times daily, available also as a cream; thenylpyramine hydrochloride,[23] available in capsules of 25, 50 or 100 mg., in a syrup and a cream; thonzylamine hydrochloride,[24] used in the form of 25, 50 and 100 mg. tablets and as a cream; and chlorprophenpyridamine maleate,[25] one tablet of 4 mg. three times daily. Correspondingly smaller doses of the antihistaminics are used for children. The oral dose of these compounds should be kept to a minimum to avoid unpleasant side effects, particularly if the patient is employed in work requiring mental alertness. Care should be observed in the initial use of these compounds since they have been known to cause "sensitization." They should not be used in the acute stage of the condition. If benefit is to be derived from the use of an antihistaminic, this will be evident within a short period of time, usually a week.

Since the alkalinity of soap may be irritating, it should be replaced, as a detergent, by one of the sulfonated "soapless" products.[26, 27, 28, 29]

The results of excessive scratching may

be avoided somewhat by having the patient wear mittens, cutting the fingernails short, and in some cases by "splinting" the affected part.

If infection exists, use of penicillin and sulfa drugs, systemically and locally, or bacitracin ointment locally, is indicated.

It should be borne in mind that any drug may cause sensitivity reactions in some cases. Overtreatment should be avoided.

Generally speaking, ultra-violet radiation is contraindicated. Exposure to x-ray may afford some relief, particularly in chronic cases. Acute cases should not be exposed.[1]

Encouraging results have not been obtained from attempts at nonspecific desensitization by the use of calcium in various forms, sodium thiosulfate, orally or intravenously, or strontium bromide.

Experimental use of ACTH has had a temporary beneficial effect followed by relapse on cessation of therapy.[31]

Any derangement of general health, such as constipation, dyspepsia and hypertension, should be treated promptly.

Prognosis Cure will depend most often upon the elimination of the exciting factor. Nevertheless, relief from some of the symptoms, particularly the itching, will do much in improving the mental outlook of the patient. No medicine has a curative effect in eczema.[1] Remissions may occur spontaneously only to be followed by exacerbations.

Infantile eczema This is one of the commoner skin affections of infancy. It is not fundamentally different from the eczema of more mature subjects,[1] and it is a result of the failure of the skin to adjust itself to the environment.[3]. The eruption usually appears on the face and scalp, although the trunk and limbs may be affected. Dietary factors alone are not responsible but the effects of the addition of a new food to the diet should be considered.[3] External irritation and exposure are important factors as is also general irritability associated with dentition and mild gastro-intestinal upset. Treatment follows the general lines given above. In all cases of infantile eczema, special care should be given to general cleanliness.

Prognosis With proper cleanliness and treatment, prognosis is usually good provided we are not dealing with a true allergic dermatitis (atopic eczema or disseminated neurodermatitis).

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Lesions of the Breast

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To begin a discussion of these lesions we might consider first a classification based on the relative frequency and the over all importance to the patient. Such a classification is by no means complete, but it includes the more commonly seen lesions and may help to organize the subject in the mind of the reader rather than produce confusion by including many rare entities.

1. Lesions resulting from endocrine imbalance
   - A. Chronic cystic mastitis
     masoplasia
     Schimmelbusch's disease
     cystic disease of the breast
   - B. Fibroadenomata
   - C. Intracystic papillomata
2. Lesions frequently mistaken for malignancy
   - A. Plasma cell mastitis
   - B. Fat necrosis
3. Lesions of pre-malignant potential
   - A. aberrant breast tissue
   - B. acinar or ductal epithelial hyperplasias
   - C. myxomatous degeneration of fibroadenomata
   - D. Hyperplastic skin and nipple lesions
4. Malignant disease of the breast
5. Miscellaneous lesions of the additional structures of the breast, e. i., lipomata, sweat gland tumors, etc., which will not be discussed.

Chronic Cystic Mastitis That the ovary has a cyclic effect on the breast similar to that on the uterus is well established. This effect is considered to be an alternating proliferation and involution. When, for reasons at present unknown to us, this endocrine effect becomes disturbed, various abnormal conditions occur in the breast. While the exact mechanism is unknown we are nevertheless convinced that the ovary is the primary cause and we classify them therefore under the heading of endocrine imbalance lesions. The most important of these is chronic cystic mastitis.

This term may immediately meet with many objections and rightfully so. Its use in this discussion, however, is based on the fact that it is more or less universally understood regardless of the fact that it may be, pathologically speaking, incorrect.

Mazoplasia Or mastodynia may be considered the earliest form of chronic cystic mastitis. It usually occurs in young women below the age of 30, beginning as a painful area which is worse in the premenstrual or menstrual period. The breast has no palpable lumps or nodules, but it is described as being granular to feel and quite tender. This process may spontaneously subside or it may progress to the second type of chronic cystic mastitis.

Schimmelbusch's disease This type has, in addition to the proliferation of the acinar and ductal epithelium, the formation of cysts due to blockage of the ducts by the proliferated epithelium. These cysts give the breast a nodular feel and it may be difficult to distinguish from other tumor masses. The presence of a bilateral involvement and a definite pain with menstrual aggravation may aid in the diagnosis of this form. On occasion there may be a nipple discharge of varying color: white, brown, green, etc. This is due to the epithelial proliferation, modified glandular activity, cellular débris, etc., and necessitates distinguishing the lesion from interductal papilloma.

Fig. 1
Schimmelbusch's disease. Shaded areas represent multiple cysts scattered throughout the breast.

Both these forms are greatly benefited by pregnancy in contradistinction to fibroadenoma and cancer, which are adversely affected by the endocrine effects of gestation.

Simple cystic disease The third form occurs in older women at or beyond the menopause. It is primarily an involution effect and consists of single or occasionally multiple large cysts, lined by a simple epithelium with no proliferative epithelial characteristics. This form seldom gives much difficulty unless the cysts become very large. Aspiration can be used both therapeutically and to differentiate it from the intracystic papilloma which usually produces some bleeding into the cyst cavity.

The question of chronic cystic mastitis being a pre-malignant lesion is still unanswered. While some statistical studies support the contention that it is, the present day consensus seems to hold that it can safely be treated conservatively and watched for evidences of definite tumor formation or bloody nipple discharge.

Fig. 2
Cystic disease. Shaded areas represent large cysts.

Conservative treatment consists in the use of antagonistic hormones such as testosterone or certain physiologic antagonists such as thiamin chloride. Unless a dominant lump appears biopsy is best withheld for many reasons, not the least of which may be a sense of false security gained from a negative result which may influence one to disregard a true dominant lump that might occur later.

Fig. 3
Bloody nipple discharge.

Fibro-adenoma This breast lesion occurs mostly in the young woman. It

produces a proliferation of that specialized connective tissue that surrounds the acini. This results clinically in the formation of a discrete tumor mass. This tumor usually occurs in the mid or outer portions of the breast. It is not attached to the skin or underlying fascia and is hence very easily movable. Its borders are usually smooth to palpation although some lobulation may occur. It increases in size very gradually although pregnancy may cause a marked acceleration in its rate of growth. If allowed to grow unmolested it may reach large dimensions and myxomatous changes may occur which may further lead to sarcomatous degeneration. Being a discrete mass it should always be removed since its diagnosis, while ordinarily made with ease, cannot be made with 100 per cent certainty. It can usually be removed easily. It presents a definite encapsulated tumor which cuts with a squeaking sensation, and presents a homogeneous white or gray shining cut surface which pouts out above the capsular edge.

Intracystic papilloma In this lesion, as the name implies, the epithelial lining of a cyst is thrown into folds which project into the cyst lumen. This papillary growth is very fragile and invariably results in some bleeding into the cyst. This bloody fluid can sometimes be detected by transillumination or may require needling. At any rate if bloody fluid is determined to be present a papilloma should be suspected and since they have a tendency to become malignant an excision of the entire cyst should be carried out followed by careful cytologic examination of the papillary projection. If malignant change is found a radical mastectomy is of course indicated.

Fig. 4
Intracystic papilloma. Tumor is completely encapsulated.

Lesions mistaken for malignancy Plasma cell mastitis is a disease of unknown etiology. It is characterized by ulceration of the ductal epithelium with proliferating granulation tissue, producing fibrous tissue scarring and much intraductal cellular débris. In its early form, while confined mostly to the ducts, it is known as comedo mastitis because of the filling of the ducts with this material. This débris is easily expressed from the cut surface and has the general appearance of a comedo. In its later stages there is a breakdown of certain lipid substances in the ducts and extrusion of these products into the periductal tissues. These fatty substances set up an inflammatory reaction similar to that seen in tuberculosis and the pathological process was at one time known as pseudotuberculosis. It is characterized by the accumulation of epithelial or plasma cells, giant cells of foreign body type and round cell infiltration. Grossly the lesion has considerable retraction due to the fibrous tissue scarring and gives the impression of malignant growth. The cut surface, however, has a brownish discoloration and imparts a brown stain to the surrounding tissues.

A similar lesion which occurs in the more peripheral portions of the breast is fat necrosis. This lesion is usually preceded by some form of trauma which causes breakdown of fat in the breast. The intermediary products of the fat destruction set up an irritative phenomenon which marshals the body defenses in a manner similar to that of plasma cell mastitis. This causes considerable scarring and retraction and may be mistaken for a scirrhous carcinoma.

The gross appearance of these lesions may lead one immediately to consider a

radical mastectomy since they are so similar to carcinoma and so forbidding looking on cut section. A reasonable index of suspicion followed by microscopic section, however, may save both patient and surgeon the rigors of a radical operation.

Pre-malignant lesions of the breast In this category there is considerable disagreement among the students of breast lesions. While it is probably true that some lesions have a higher percentage of ultimate malignant change, there are none that have a significance similar to multiple colonic polyposis, which demands immediate removal to prevent almost certain future malignancy. They do, however, necessitate a close scrutiny at frequent intervals for appearance of signs suggestive of malignant change.

Ectopic or congenital supernumerary breasts seem to be more prone to develop neoplasm, as does ectopic tissue elsewhere in the body. This is particularly true of ectopic tissue that does not possess an areola and nipple.

Chronic cystic mastitis probably has a greater incidence of eventual neoplastic change than does normal tissue. This lesion, however, is so common that any treatment other than close observation would seem unnecessarily radical.

Intraductal papilloma, especially if accompanied by bloody discharge, has been formerly thought to be of ominous significance. Late reports in the literature attach less importance to this clinical sign. When accompanied by a palpable mass the likelihood of malignancy is greatly increased and such lumps should be removed for biopsy study and treated accordingly. Where there is no palpable mass but an area which produces discharge on pressure this area should be explored for the presence of papillary growths. Where there is nipple discharge only, a period of observation is certainly justified in the young woman, while in the older age group where malignant change may be expected a simple mastectomy may be considered.

Nipple retraction, eczema and other similar conditions of the skin require frequent observation for signs of malignant change.

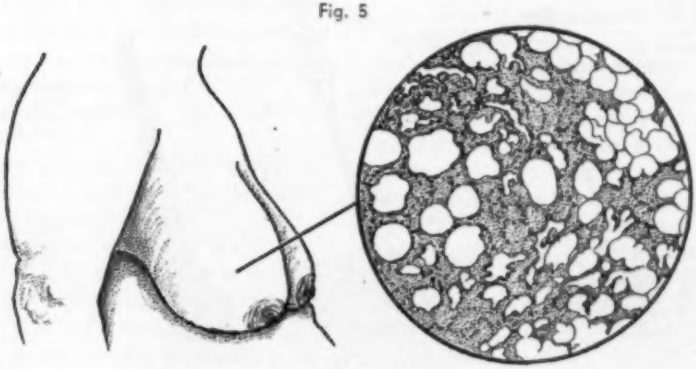
Giant myxoma arising from neglected fibro-adenoma has been shown to have an appreciable incidence of sarcomatous change and should be excised.

Other factors to be considered in the management of these lesions are:

1. The residence location of the patient and its relation to the convenience of subsequent observational visits.

2. The attitude and intelligence of the patient and her understanding of the

Fig. 5



a. Obese breast in which fat necrosis may occur.
b. Microscopic appearance of necrotic fat lesion.

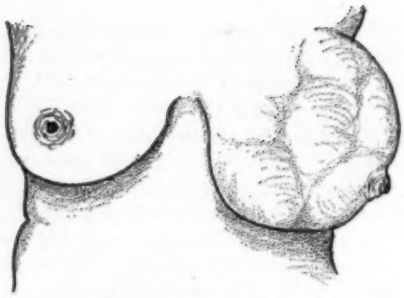


Fig. 6. Giant myxoma.

necessity for an observational period.

3. The possible development of a cancer phobia with its multiplicity of effects on the patient.

4. The presence of atypical cells in a biopsy of a suspicious lesion. These and probably additional factors in any given case must be considered in the decision as to whether to eradicate such lesions by prophylactic mastectomy or to await development of more definite evidence of malignant change.

Cancer of the breast This lesion will probably be seen several times a year by the ordinary busy practitioner. Since the results of treatment depend mostly on its early recognition it behooves us to know the symptoms and signs and to be alert for their presence.

By far the largest percentage of breast cancers are accidentally found by the patient herself. For this reason we should encourage routine self-examination at monthly intervals. If in the pre-climacteric age, this is best done between the menstrual periods. The only reasonable objection to such examination is the possibility of producing neurotic tendencies in some women, but I am sure we will agree that this will be far outweighed by earlier finding of even a few cancers.

The technique of examination for breast cancer has been well described in numerous publications.

1. Observation for asymmetry or skin retraction with various changes in position.

2. Palpation in a systematic manner of the entire breast both in erect and supine positions with the pectoral muscles relaxed and again contracted, using the balls of the fingers to compress the breast tissue against the chest wall. This method of examination is used by the patient also in her monthly routine check.

3. Expressive manipulation of the nipple to determine presence of any discharge.

4. Palpation of axillary and supraclavicular areas for lymph nodes.

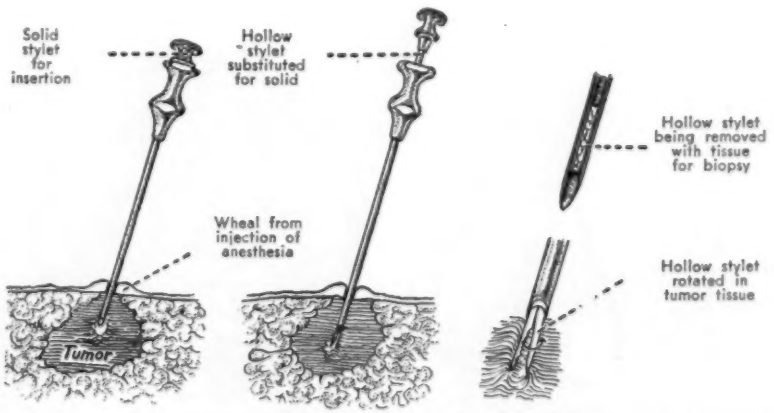


Fig. 7. Removing tissue for biopsy with Silverman needle (after Schlossberg).

5. Additional diagnostic procedures to aid in differentiation of a tumor if found, e.i., transillumination to distinguish cystic from solid tumors. Aspiration or needling with the Silverman needle. X-ray examination of the soft tissues and excisional type of biopsy.

When tumors are found in the breast additional examinations are indicated. A pelvic examination may frequently show some pathology which may be related to the breast lesion. Palpation of the liver for metastatic nodules and x-rays of certain bones may show an advanced extension of an otherwise innocent appearing lump.

The classification of breast cancer is important in the determination of the type of therapy to be used. Clinically the 4 types of Portman are generally used.

Fig. 8. Scirrhous carcinoma.

1. Where the tumor is confined to the involved breast alone.
2. Where the axillary nodes are involved.
3. Where the supraclavicular nodes are involved or spread to the contralateral side has occurred.
4. Where distal metastases are demonstrable. The general rule is to treat the first two by radical operation and the latter two by x-ray.

It is true that a certain percentage of error occurs in the determination of axillary node involvement, but fortunately the mode of treatment is not generally affected regardless of the direction of the error.

At this point it might be well to point out that once a lesion is classified as inoperable it cannot be reversed by x-ray or other therapy regardless of the disappearance of signs that originally determined the inoperability.

Pathologically carcinoma of the breast may be classified with respect to the component tumor architecture. The scirrhous type is the most common and probably the most malignant. Other types such as medullary, adeno, mucoid and comedo carcinomas are less common and less malignant in the order named. These in turn may be classified by Broders' method for prognostic purposes, but the type of treatment to be used is directed by the clinical classification regardless of the pathological grade of the tumor.

The treatment of the types 1 and 2 has been little changed since the original operative techniques of Halsted and Meyer. There are many modifications of the skin incision and other minor points but the cardinal principles remain the same.

1. Removal of adequate margins of skin.
2. Removal of both pectoral muscles.
3. Removal of the axillary glands and the gland-bearing area.
4. Removal of all tissues en bloc without cutting across areas of tumor involvement.

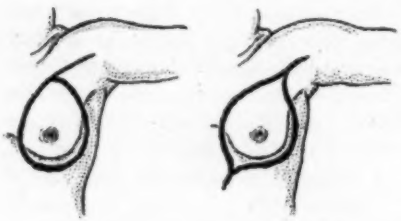
The question of supplementary x-ray either before or after operation has been somewhat controversial but if given at all it seems that after operation is the more optimum time.

As experience has been gained we find that certain conditions may exist that reduce the ultimate outlook for cure to a minimum. These are the contraindications to radical surgery and are enumerated as follows:

1. Carcinoma occurring during pregnancy or lactation.
2. The occurrence of extensive edema of

the skin indicating lymphatic blockage by tumor cells.

3. Satellite skin nodules.
4. Intercostal or parasternal lymph node involvement.
5. Edema of the arm.
6. Supraclavicular metastases.
7. Inflammatory carcinoma.
8. Any distal metastasis and,
9. Any two of the following conditions.
   A. Ulceration of the skin.
   B. Edema of less than one-third of the skin of the breast.
   C. Fixation of the tumor to the chest wall.
   D. Presence of axillary nodes over 2.5 cm. in diameter.
   E. Fixation of axillary nodes to the skin or underlying fascia.



Halsted Meyer

Fig. 9. Operative incisions for carcinoma.

The x-ray treatment of types 3 and 4 is more properly a radiological subject and will not be considered further except to observe that the modern technique and equipment produces a better outlook than x-ray treatment of a few years ago.

Other palliative treatment by castration and hormones has gained some popularity of late. However, there is considerable variation in the response to these methods and on occasion some undesirable side effects occur. When other methods have failed, however, a trial of these methods is certainly justifiable as even a small amount of relief is gratefully received by these unfortunate women.

When severe pain is uncontrollable the various sensory nerve interrupting procedures may be considered.

Paget's disease, once of uncertain pathological significance, is now definitely recognized as a cancerous condition. It should be suspected in any eczematous type of nipple lesion. It should be biopsied to differentiate it from Bowen's disease, epitheliomatosis, simple eczema, etc., and treated like any other breast carcinoma by radical mastectomy.

Summary A clinical classification of some of the more common breast lesions is given. A brief description of these conditions follows including the generally accepted modes of treatment.

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2710 Capitol Avenue

Three and a Half Pound Tumor Removed from Infant

A three and a half pound tumor was removed from a thirteen month old boy recently. A three man surgical team operated on the boy at St. Francis Hospital in Hartford, Conn. At last report, the boy was recovering nicely.

Rehabilitation of the Arteriosclerotic

Physiologic Rehabilitation of the Arteriosclerotic Worker For Industry

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Introduction The purpose of this paper is to present a medical approach to preventive maintenance of older people in industry. With the tremendous strides made by researchers in degenerative disease within the last 10 years, many more people are living beyond their sixtieth year. As a result of this increased longevity, a serious socio-economic problem has arisen. Furthermore, increasing demands for youth by the armed services and the expanding defense mobilization program have necessitated the return of many oldsters to industry. Hence the medical profession must meet the challenge created by their return.

Material and Methods Some sixty-five patients have been selected as a basis for this report. They are typical of 792 geriatric problems rehabilitated industrially by this author in private practice or at a Boston geriatric clinic, over the last five years. Ages ranged from 53 years to 79 years, with 85 per cent under 68 years of age. Occupation varied from manual laborer to industrial executive. Each patient was evaluated as follows: first, an industrial history was elicited, during which the exact details of the occupation were noted. Then a comprehensive physical examination was done. Laboratory studies on heart, blood, and urine were made. Functional stress studies were performed on those anatomic systems which were particularly involved in the individual's occupation. Treatment was then prescribed, according to the specific variants of degenerative diseases present in each individual. In every instance, the patient was considered as a total physiological entity. The ischemic arteriosclerotic brain was treated simultaneously with the angina of coronary sclerosis, for which the patient initially sought assistance. Concomitant with therapeutic physiologic alteration of the body economy, a parallel observation was made upon the occupational capacity of the individual. At the end of this paper, a few characteristic cases will be cited.

Pathology The symptomatology presented by this group was protean in scope, since it was the end result of atherosclerosis and arteriosclerosis. In order to understand the therapeutic rationale outlined below, we must briefly review the fundamentals of arteriosclerotic involvement of the various organ systems. Generally speaking, atherogenesis appears to be dependent upon several factors. Increased

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concentration of blood lipids in older people occurs with an attendant inability to excrete cholesterol excesses (1)-(2). Deposition of these excesses arises in the thicker arterial intimas (3), particularly at "eddy sites" (arterial bifurcations), and in tortuous vessels (retinal, cerebral, and renal vessels) (4). Injury from initial fragility produced by nutritional deficiency or metabolic disorders enhances attendant cholesterol deposition (5). Hypertension may force more macromolecules of cholesterol into the intima.

Nervous System: As atherosclerosis develops in the cerebral and peripheral nervous system, there is initiated a progressive histanoxia and malnutrition of nerve tissue, which becomes fatty-infiltrated, then vacuolized, and finally replaced by gliosis. There is a concomitant decrease in functional activity, and all structures dependent upon the nervous system for trophic and functional control suffer. In the course of this atheroarteriosclerotic progression, rupture of rigid arteries or total thrombotic or embolic obstruction may create an acute crisis.

Cardiovascular System: Virtually every organ system may be involved, since each organ is dependent, functionally, upon the receipt of oxygen, nutritional elements, and removal of waste products. And, these three factors are regulated by the volume of blood received by the organ. However, the chief structures we must consider are the heart and peripheral arteries of the lower extremity. Coronary artery sclerosis or thrombosis with attendant myocardial ischemia is a major problem to the internist and geriatrician. Likewise is arteriosclerosis obliterans and its sequelae. The significance of an ischemic, labile, senile, sympathetic innervation of the vascular tree in the lower extremities is a good example of arteriosclerotic synergism of two systems. Hypertension and its sequelae are often another manifestation of arteriosclerosis.

The Respiratory System: Per se, it does not suffer relatively too much although pulmonary elasticity decreases, and pulmonary fibrosis ensues.

The Gastro-intestinal System: This manifests its reaction to decreased circulation by diminished function. Automaticity of vegetative control is less exacting, glandular secretion is less vigorous, and resistance to insult is lowered. A good example is the long standing silent malignancy, which is overlooked as a "mild constipation" until it "asserts its presence"; at this time it has become inoperable. The pathogenesis lies in ischemic (vascular) and hypotonic neurotropic action.

Genito-urinary System: Diminished excretory capacity of the renal system results from a progressive decrease in the numbers of functional renal units. An elevation in the blood concentration of waste products further aggravates the ischemic picture. The genital system, under the impetus of circulatory and hormonal decreases, undergoes atrophy and diminished function.

Endocrine System: Here again, vascular ischemia decreases hormonal production. Ovarian, testicular, adrenal, and thyroid activities are good examples. Because antagonistically-balanced hormonal systems are disturbed, some endocrine activities are augmented. Some anterior pituitary tropic hormones are produced in excess, because they are unchecked.

Musculoskeletal System: The senile atrophies and muscular hypotonias occur from decreased neurotropic action; muscular hypometabolism results from nutritional and vitamin deficiencies, hypothyroidism, and decreased enzyme action. Bone ischemia from decreased bone metabolism and nutrition presents us with the degenerative arthritides and osteoporosis.

The Integumentary System: Through loss of neurotropic and nutritional vigor, becomes dehydrated and loses elasticity; the skin becomes thinner.

Special Senses: As a result of decreased nutrition, these experience abnormal sensations and impairment of function.

Body Chemistry: Strangely enough, there is not much alteration in the normal values of the various blood elements. But, the ability to maintain biochemical homeostasis is not as efficient in the older person. Also nitrogenous waste products, chlorides, and lipids tend to remain at higher levels in the oldster.

Therapy If we analyze the concepts of the previous paragraph, we can see that our problem in the arteriosclerotic is resolved into many approaches.

(1) One must attempt to arrest, or slow down, atheromatous progression.

(2) One must try to improve the oxygenation, the nutrition, and elimination of the ischemic organ.

(3) An effort must be made to ameliorate the symptomatology resulting from impaired organ function.

(4) The patient and the physician must realize that arteriosclerosis is, at the present time, progressive, and accept that fact; the patient must be reoriented, accept, and adjust to his limitations. Hope-inducing psychotherapy is of extreme importance and usefulness, and is a valuable adjunct to medical management.

(5) It must be realized, by the physician, that many clinical facets of arteriosclerotic pathogenesis can not be evaluated quantitatively and accurately by the present diagnostic facilities known to medical science. Furthermore, many of these clinical entities have no specific. It, therefore, behooves the practitioner to treat a total entity. Rational therapy must be based upon an appreciation of the multiple deficiencies associated with arteriosclerotic disease.

To effect amelioration of degenerative disease, we have found the following rationale to be very helpful.

(1) An adequate diet, with emphasis on high protein, moderate carbohydrate, low-fat, and low cholesterol content, is prescribed.

(2) Oxytropic vitamins and hormones stimulate cellular oxidation with elimination of cholesterol esters. Thyroid and oxytropic B Complex vitamins catalyze intracellular enzymatic actions by their prosthetic groups; thiamine, niacin, and riboflavin, in therapeutic doses, are particularly helpful, as is alpha tocopherol (6). Usual hypermetabolic precautions must be exercised in the administration of thyroid extract.

(3) Colloidal stabilizers maintain plasma lipids and lipoids in supersaturated solution, and control colloidal dispersion of chylomicrons. Phospholipids, lecithoproteins, and other proteins mediate this stabilization. When the relative phospholipid concentration drops, the bulkier chylomicrons are precipitated out and there is less colloidal homeostasis (7). The high protein diet is a good source of these stabilizers. Another approach is the use of detergents (8). In that connection, alpha tocopherol may be used (9).

(4) The lipotropic factors of vitamin B Complex have been shown by many to decholesterize atheromatous deposits in man and experimental animals (10)-(11)-(12)-(13). Notable for this effect have been choline, inositol, pyridoxine, and methionine. Steiner and Domanski (14), and Gross and Klein (15) have lowered blood cholesterol with choline. Since King (16) has referred to low choline dietary intake, it appears that normal dietary lipotrope intake needs augmentation.

(5) Pharmaceutical and/or physiotherapeutic agents are required to mitigate the symptomatology of decreased function. This group is quite exten-

sive in scope. Illustratively, we might mention antispastics, antihistamines, anticatabolic hormones, sedatives for the excitatory state, stimulants for the depressed situation, pharmaceuticals assistive to secretory structures, corrective physiotherapeutic aids, and sympathectomy when indicated.

(6) A proper and hopeful psychological orientation of the patient, with reference to the nature of his disease, and the limitations it imposes, is indicated.

Representative Case Histories

Case 1. J. G., a 63-year-old insurance agent, was compelled to retire because he was unable to remember previous commitments, could not control "outbursts of temper" at the slightest provocation, and was unduly preoccupied with effort angina. Past history was remarkably free from disease. Family history was not significant. Social history and family adjustment shed no light on his problem. Physical examination revealed a tense, apprehensive man, in no acute distress. Respiratory, gastro-intestinal and genito-urinary systems gave no objective findings. Cardiovascular study revealed moderately sclerotic peripheral pulses. Heart sounds were diminished, with a snapping M-1, and irregular extrasystoles. Neuromuscular evaluation revealed a mild tremor of the Parkinsonian type in the hands, mask-like facies, emotional instability, retrograde amnesia, hyperactive deep tendon reflexes, and muscular atrophy, particularly in the appendicular skeletal group.

Laboratory studies revealed these findings. Weight was 144 lbs.; blood pressure 140/106; EKG was essentially normal except for the irregular extrasystoles, with pulse rate of 92; fluoroscopy was negative. Blood cell findings were within normal limits; urinalysis was normal except for a positive urobilinogen in dilutions of 1:300; PSP excretion was 73%; Sulkowitch test for urinary calcium was 2 plus. Calcium, glucose, and bilirubin blood levels were within normal limits; blood cholesterol was slightly elevated—260 mg. per cent (150-250 considered normal for method used).

Therapeutically, after reassurance, he was placed upon a high protein, high carbohydrate, low fat, low cholesterol diet. He was given a mixture of the lipotropes which furnished 1.5 grams of choline, 750 mg. of inositol, and 500 mg. of methionine, daily. His high potency vitamin B Complex with C furnished, daily, 75 mgs. of thiamine, 37.5 mg. of riboflavin, 300 mgs. of nicotinamide, 6 mgs. pyridoxine, and 300 mgs. of ascorbic acid. In addition, 300 mgs. of alpha tocopherol was given, as emulsified, solubilized (with a sorbitol derivative), enteric-coated capsules. For his Parkinsonian complex, an anti-spastic was employed.

After two months of such treatment, there was sufficient amelioration in memory defects, irritability, Parkinsonism, and his angina, that he could return to his former occupation on a full time basis.

About that time, there became available for investigation a new mixture* of lipotropes and oxytropes, six capsules of which contained 300 mgs. of emulsified and solubilized alpha tocopherol, 1.0 gm. of choline, 0.9 gm. of inositol, 0.6 gm. methionine, 18 mg. pyridoxine, 30 micrograms of vitamin B-12, and 60 mg. of thiamine. In the construction of this enteric-coated capsule, the various incompatibles were carefully separated. The patient, after two months, was placed on the new capsule, 6 daily. His anti-spastic was reduced by half. Four months after initiation of treatment, there was no angina present, memory defect was absent, Parkinsonian symptoms were obviated, and previous mental irritability was absent. Objectively, heart sounds were improved in intensity; there was a 3 mm. increase in amplitude of the QRS complex, but the arrhythmia was still present. Pulse rate dropped to an average of 82; blood pressure was 146/92; weight was 150 lbs.; PSP excretion was 82%; Sulkowitch test

was negative; blood cholesterol was 210 mgs. per cent. After the second two months, dosage was again halved, and the patient has continued to maintain his improvements.

Case 2. L. T., was a 63-year-old night watchman in a large manufacturing plant. He was compelled to retire because of severe pain and swelling in both feet after 3-4 hours of work. On his first visit, his symptoms were as noted, and of several months duration. Past history was noncontributory, as was family and social history. Physical examination revealed a moderately nourished elderly man in moderate pain. Respiratory, gastro-intestinal, and genito-urinary systems were negative. Cardiovascular study revealed no cardiac enlargement or murmurs, but sounds were of snapping, diminished intensity. Dorsalis pedis and posterior tibial arteries were bilaterally pulseless. Feet were swollen, red, and tender. There was no pitting edema. Deep tendon reflexes were hyperactive.

Laboratory studies revealed the data which follow. Weight was 162; blood pressure was 110/92; EKG showed a Q2-Q3 pattern characteristic of an old posterior infarct; fluoroscopy revealed a normal heart shadow, with aortic calcification; there was also peripheral (leg) vascular calcification on x-ray. There were no leg or foot oscillometric fluctuations. Surface pyrometry in the feet was subnormal. Retinal vessels were moderately sclerotic (grade ii). Blood cell studies were negative except for white cell count of 11,000 with 75% polymorphonuclear neutrophiles. Urinalysis was negative. PSP excretion was 80 per cent. Sulkowitch test was negative. Calcium, glucose, bilirubin, and urea nitrogen were normal, as was cholesterol—150 mgs. per cent.

The patient was reassured that some amelioration might be anticipated. He was placed upon a high protein, moderate carbohydrate, low fat, low cholesterol diet. Also the lipotrope-vitamin capsules, six daily, were ordered, along with a high potency B Complex. He was also instructed to perform Buerger's exercises. After three weeks, he was again seen, with marked amelioration of presenting symptoms. After two months, he was allowed to return to his former job as night watchman. At that time, color was normal, swelling was absent, pulsation could be elicited in the rt. dorsalis pedis and left posterior tibial arteries; surface pyrometry was normal, but oscillations were still absent. There was no change in the EKG, but M-1 intensity was more forceful; the patient had gained three pounds. At the moment, he is on a maintenance dose of three lipotrope-vitamin capsules and one B Complex capsule, daily.

Case 3. P. M., was a 67-year-old white truck farmer, who was unable to carry out his routine duties because of weakness, dizziness, and exertional dyspnea of several months duration. Past history was non-contributory except for a cholecystectomy at the age of 51. Family and social history were negative. Physical examination revealed a well nourished male in no acute distress. Respiratory and genito-urinary systems were negative. Cardiovascular system was not particularly remarkable, although a snapping M-1 was decreased in intensity, and pulses were moderately sclerotic. Liver edge was soft and felt at the level of the umbilicus. Reflexes were hyperactive. Skin revealed numerous spider-like petechiae.

Laboratory studies revealed the following data. Weight was 171 lbs.; blood pressure was 172/110; pulse rate was 86; EKG was within normal limits except for a slight left axis deviation. X-rays revealed thoracic and abdominal aortic and peripheral (leg) arterial calcifications, with diverticulosis of the sigmoid colon. Blood cell studies were normal. Blood urea nitrogen was 32 mgs. per cent; the

*The lipotrope-vitamin capsules (cholivascuals) employed in this study were generously furnished by the Vitamin Corporation of America.

bromsulfalein liver function test revealed 30% dye retention; icterus index was 30; cephalin flocculation test was 3 plus; thymol turbidity was 6.2; blood cholesterol was 280 mg. per cent, and cholesterol esters 232 mg. per cent. Total protein was 6.1 gms. per cent; albumin was 3.2 gms. per cent. Urinalysis was within normal limits except for a 3 plus albumin, a urobilinogen positive in 1:300 dilution, and a PSP excretion of 62%; Sulkowitch was negative.

The patient was reassured that amelioration might be forthcoming. He was placed on a high protein, moderate carbohydrate, low fat, low cholesterol diet, and given the new lipotrope-vitamin capsules, six daily; he was also given supplementary choline—6 gms. daily, along with a high potency B Complex; thyroid, gr. ½ daily was added.

After 12 weeks of treatment, his symptoms had become virtually absent. Liver edge was no longer palpable. Blood pressure had dropped to 130/90. Bromsulfalein retention was 10%; icterus index was 11; urea nitrogen was 17 mgs. per cent; cephalin flocculation was 1 plus; thymol turbidity was 2.6; cholesterol had dropped to 194 mgs. per cent, with cholesterol esters at 102 mgs. per cent. Total protein was 7.6 gms. per cent with albumin at 4.5 gms. per cent. There was no albuminuria, and PSP recovery was 73%.

The patient was permitted to return to his occupation, on a maintenance dose of three of the new lipotrope-vitamin capsules, and one high potency B Complex capsule daily. Symptoms have been minimal, and have not necessitated any time lost from work.

Discussion There will undoubtedly be critics who will classify the aforementioned treatments as "shot-gun" therapy. Well, we are dealing with basic disease of many facets and multiple contributory vectors, the nature and accurate quantitation of which are not comprehensively understood. Of necessity, much has to be empirical. But, the important fact is that a dynamic attempt at amelioration is being made; and furthermore, these active efforts are surprisingly often rewarded. No one will deny the value of a high protein diet for its specific dynamic action, and as a source of protein colloidal stabilizers (17); Gofman and Associates (18) have shown that a low fat added to a low cholesterol diet reduces the serum cholesterol levels. Anent the stabilizer problem, Payne and Duff, and Hueper (19) have shown that detergents will increase serum phospholipids and maintain supersaturated colloidal dispersions. For that reason, alpha tocopherol was used for its detergent (surface activity) effect, (20). Furthermore, since it has been used with variable success for a wide variety of clinical entities, whose common denominator has been histanoxia, decreased nutrition, and fibrosis, it was felt that alpha tocopherol might exert a nonspecific, beneficial effect. One need but mention Steinberg's work on Dupuytren's contracture (21), Burgess' results with the collagenoses (22), and with peripheral ulcerative arteriosclerosis (23), Bang and Associates' studies on neuromuscular degenerations (24), and Christy's work on the menopausal syndrome, (25), to appreciate the protean effects of alpha tocopherol. The oxytropic vitamins mediate their effects via prosthetic groups, and raise the level of cellular oxidations; thereby, cholesterol excesses are eliminated. Thyroid preparations, by stimulating cellular metabolism, increase the elimination of cholesterol.

Anent the lipotropes, Perlman and Charkoff (26) have proved that choline increases the rate of formation of phospholipids. Methionine, after conversion in the body, acts like choline. Inositol, according to Rideout and Associates (27), lowers blood levels of cholesterol and its esters only in the presence of fat. Drill and McCormick (28) have shown that Vitamin B-12 exerts a significant lipotropic

effect. Synergic action of the common lipotropes has been shown by Best (29)-(30)-(31) and Gelphardt (32).

Summary

It appears that the following important factors are involved in deposition of cholesterol in the arterial intima.

(1) Not the absolute blood level, but the size of the colloidal particles is important. The work of Gofman (33)-(34) has shown, via ultracentrifuge, that the Sf 10-20 flotation range is particularly pathogenic.

(2) The state of supersaturated colloidal stability of the phospholipids, whose production is enhanced by the lipotropes, is a very significant factor.

(3) The decholesterization of atheromata by the oxytropic vitamins and the lipotropes plays a vital role. Leary (35) and Wilens (36) have shown that atherogenesis is a discontinuous process, and that atheromata can be healed.

(4) It has been our impression, for a long time, that the phospholipid-cholesterol ratio was all important. Ahrens et al. (37), have shown that atherosclerosis is infrequent if the ratio is greater than 1.

Arteriosclerotic sequelae effects on employability are considered. Some 65 out of 792 geriatric cases are used as the basis for this report. The pathology of this degenerative problem is discussed briefly. The therapeutic rationale is outlined. Three representative case histories are presented. The role of the various therapeutic synergists is discussed.

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NOTE

On the day this manuscript was mailed to the publisher, this author noted, for the first time, Morrison's paper on Arteriosclerosis in the Journal of the American Medical Association—April 21st issue. His work is substantiated mainly, by our findings, but our therapeutic approach is somewhat different, and the results of our own studies over five years.

Anterior Poliomyelitis

Treatment of Bulbar and Cervical Lesions by Intravenous Aureomycin and Amigen: Management in a General Hospital (Continued from May Issue)

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Due to the many requests, we have decided to clarify the method of treatment of intravenous aureomycin and amigen in poliomyelitis.

Method of Treatment Aureomycin and amigen were given intravenously for: 1. Signs of bulbar or cervical involvement (facial paralysis, upper limb paralysis, dysphagia, aphonia, etc.); 2. Persistent vomiting; 3. Evidence of advancement of disease or exacerbation of poliomyelitis (includes upper and lower extremity paralysis). The patient should receive intravenously 5 mg. per Kgm. of his body weight per 24 hours. One-half the dosage of aureomycin is dissolved in a solution of 5 per cent glucose and water and given intravenously in the A.M. The second half of the dosage of aureomycin is dissolved in 5 per cent glucose and saline and given intravenously during the P.M. With adults the amigen is given in divided doses of 500 cc. in the A.M. and 500 cc. in the P.M., and in children 300 cc. is given in the A.M. and 300 cc. in the P.M. This is the ordinary method of treatment which is given when the cases are not too severely ill; that is, first the aureomycin, then the amigen, the aureomycin again, and then the amigen. This treatment continues for the 24 hours. The average treatment varies from 48 hours in the mild cases to 6 days in the severe cases. In the severe cases, both solutions are given intravenously in opposite arms continuously and slowly to get the optimum effect. When this is obtained, one returns to the method advocated in milder cases.

From the many communications received regarding the use of aureomycin in poliomyelitis, one is impressed that aureomycin alone does not act directly on this virus but may prevent secondary infection of the lungs in bulbar poliomyelitis. There have been favorable and unfavorable reports on the success of aureomycin in the treatment of poliomyelitis according to the Research Library of the American College of Surgeons, which thoroughly reviewed the literature. It was found that no report has ever been made on the combined use of aureomycin and amigen for poliomyelitis. Hence, we suggest that there must be a synergistic effect between aureomycin and amigen, or the entire direct effect of our treatment depends upon the amino acids alone. We feel that our treatment does have a direct effect and that the

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progressive spread of poliomyelitis stops 48-72 hours from the beginning of treatment.

The following is a synopsis of the 1950 cases and our experiences with the use of intravenous aureomycin and amigen added to the routine treatment of poliomyelitis:

1. J.O.; 37-year-old female; poliomyelitis. Hospitalization 7/3/50 to 8/13/50.

Upon admission she was nonparalytic and had a temperature of 102°. Spinal fluid—W.B.C. 627 (P-2% L-98%). Total protein 236. W.B.C. 8,700.

This case was sent to me by Dr. Wilmer Kneale and Dr. Daniel Killoran. This patient was considered in a dangerous condition with a high cell count in an adult, and treatment as described was immediately instituted without waiting for paralysis or bulbar symptoms.

Spinal tap 4 days later—W.B.C. 323 (P-4% L-96%). Total protein 193. No further spinal taps were done. Patient was treated clinically.

Patient was given hot packs to the back and neck for relief of tender muscles. Codeine and empirin for pain. The aureomycin treatment was given for 4 days. The hot packs were discontinued on the 7th day. She remained comfortable during the rest of her hospital stay. She was allowed out of bed on 8/11/50 and discharged on 8/13/50.

She has been followed in the clinic since and has no objective signs of any involvement of her neuromuscular apparatus and has made a complete recovery.

2. F.L.; 11-year-old boy; acute poliomyelitis. Hospitalization 8/9/50 to 8/16/50.

Spinal tap showed—W.B.C. 102 (P-4 L-98). Total protein 30. Nonparalytic. Patient was put on intravenous aureomycin and amigen treatment for 2 days.

Following treatment, spinal tap showed—W.B.C. 50 (P-4 L-46). Patient was discharged on 9/18/50. He was followed in the clinic. No remission of his disease since.

3. F.D.; 13-year-old boy; poliomyelitis. Hospitalization 8/4/50 to 8/16/50.

First spinal fluid—W.B.C. 340 (P-8% L-20%). Total protein 91.

Patient was given intravenous aureomycin and amigen treatment for 2 days.

Patient was discharged on 8/16/50. No remission of his disease since at his check-up at the clinic.

4. P.W.; 17-year-old male; right leg, bladder, right shoulder, and right arm. High and low spinal poliomyelitis. Hospitalization 10/30/50 to 11/20/50.

This patient was first seen in Dr. Thomas Carnicelli's office presenting complaints of acute respiratory symptoms with stiff neck and weakness of right leg of 3 days' duration. Physical examination revealed weakness of thigh muscles and foot drop of right leg; temperature was 100°. Lumbar puncture revealed no increased pressure; spinal fluid 30 (P-10 L-20); total protein 45; W.B.C. 12,000.

Three days after admission, he developed some weakness of right arm and shoulder muscles; also developed paralysis of his bladder which necessitated tidal drainage. Paralysis of right leg became more extensive, so that entire right leg was flaccid. He was put on intravenous aureomycin, glucose, and amigen. He was kept on this regimen for 6 days and seemed to show definite improvement. Signs of weakness of his right shoulder and arm completely subsided; paralysis of bladder improved so that tidal drainage was stopped after the third day, and patient had good bladder function; paralysis of right leg improved, but he continued to have weakness of thigh muscles and partial foot drop. Patient was in hospital 22 days, and on discharge he was able to walk with slight limp and developed some atrophy of right thigh and calf muscles, and main disability was weakness of extensors of right thigh with slight foot drop. He has received continuous physiotherapy for this.

5. P.K.; 28-year-old female; 4 months pregnant. Spinal paralysis—left hip involvement. Illness 11/15/50 to 2/3/51. Duration of illness—6 weeks.

Signs consisted of weakness of the dorsiflexors of her left foot, weakness of the flexors of the hip (3); weakness of the extensors of the knee; weakness of the abductors and adductors of the left hip (1). There is atrophy of the thigh, especially of the quadriceps muscle. Left knee jerk was weak and left ankle jerk 0. Lumbar puncture cells 0; Total protein 62; Sedimentation Rate 60; W.B.C. 10,300 (P-74% L-17%).

This patient had unrecognized poliomyelitis for 6 weeks. Diagnosis confirmed on 1/19/51 by consulting neurologist, Dr. Maletz. The patient's story consists of a background of increasing weakness from October, 1950 to January 22, 1951. Intravenous aureomycin and amigen therapy given on 1/23/51 and 1/24/51. Her pain and tenderness of the left hip and thigh muscles was relieved within a few days. Within 4 weeks she was weight-bearing without the aid of crutches or a hip limp. The patient went on to general well-being until April 8, 1951, when she gave birth to a still-born infant. Dr. Culliton of the Obstetrical Service of the Lynn Hospital did not feel that there was any direct relationship between the death of the infant and poliomyelitis. Also, aureomycin and amigen have been given previously to other patients without any effect on the uterine life of the patient. The patient herself has continued well until the present time.

We realize that the foregoing cases are the routine types of poliomyelitic cases, many of whom recover without any residual whatsoever. I merely have cited them because regardless of the time and stage of the disease in which we receive them, the intravenous medication puts an end to the progress of the disease within 48 hours. All patients had very short hospital stays and had no aftermath.

We now come to a group of cases which were treated with the same type of therapy, and which I think definitely prove the contention that this combination of medicine can stop the progress and spread of acute poliomyelitis within a 48-hour period.

1. J.L.; 9066 51st Ave., Elmhurst, Long Island, New York City. 5½-year-old girl. Hospitalization 8/29/50 to 9/29/50.

This patient had a severe case of poliomyelitis which involved the abdominal muscles, the muscles of spinal respiration, and also showed definite bulbar involvement with inability to swallow or to be aroused to consciousness. There was a foamy fluid discharge coming so rapidly from her mouth that she had to be put on dependent drainage and constant suction. This patient had been unconscious for 72 hours prior to admission. Her temperature was 102.6°. Her pulse was 90-120. Her respirations were 30. The patient was immediately given intravenous aureomycin and amigen. As expected, within a 48-hour period, the patient was conscious, the temperature, pulse, and respirations were flat, and the patient could talk although she showed a marked

involvement of the palate and had a nasal twang to her voice. The advance of her poliomyelitis had definitely stopped. She still showed some respiratory and abdominal muscle involvement, and her legs moved very weakly, although her arms seemed to be free.

On the 5th day all treatment was discontinued, and the patient was allowed to eat by mouth. Except for a marked generalized weakness, the patient's condition was good, and she showed no evidences of any severe paralysis. She remained in isolation for about 10 days. She was then transferred to the general wards and given high caloric, high vitamin diet and daily physiotherapy. Patient recovered to the extent that she was allowed out of bed on the 16th day. She walked with very little assistance and has progressed rapidly in weight-bearing since. She still has a slight nasal twang to her voice and slight weakness of the left abdominal muscles and posterior neck muscles.

She was discharged and taken home by train to New York on 9/29/50 to be followed at home. On April 20, 1951 patient returned from New York for check-up. She still had a slight nasal twang to her voice and a slight weakness of posterior neck muscles and left abdominal muscles. Otherwise, her recovery was excellent and has remained so.

2. K.C.; 25-year-old female; 4 months pregnant; cervical poliomyelitis. Hospitalization 11/24/50 to 12/11/50.

This patient complained of headache, generalized pain in her back and shoulders of 12 hours' duration, nausea and vomiting of 12 hours' duration, right arm weakness, especially the hand. She was admitted with slight fever of 100.4°, pulse 100 to 108, respirations normal. Lumbar puncture—W.B.C. 92 (P-82 L-10); Total protein 66; W.B.C. 9,000 (P-76 L-20). Number of days in the hospital 16; number of days in bed 12; return visits to the clinic 6.

Because of our experience with the rapidity of progress of the illness at this point, intravenous aureomycin and amigen therapy was given. Within 48 hours the patient was relieved of her nausea, vomiting, headache, and weakness of the right arm. She progressed normally during the rest of her hospital stay and was out of bed walking by 12/6/50. Discharged 12/11/50 well with minimal grasp of the right hand. Pregnancy normal. The patient has been followed in the Polio Clinic to the present day and has shown no exacerbation of her poliomyelitis.

3. P.K.; Montclair, New Jersey; 9-year-old white male; bulbar poliomyelitis and encephalitis.

This patient was a severe case of bulbar poliomyelitis; ill for 2½ to 3 days. His disease increased rapidly until he was unconscious. A serious prognosis had been given. We were contacted by the family, and Dr. DeL. instituted the treatment immediately. Within 6 hours the patient was conscious and within 48 hours the patient was sitting up. At the end of the 5th day, the patient was eating orally, requiring no tube feeding nor tracheotomy. The patient was returned home a few days later and has been well since.

4. Patient of Dr. J.K., Wilkes-Barre, Pa. 4½-year-old male.

This patient had a severe paralysis involving both arms, trunk, and both legs. He was in the respirator, and on the 3rd day developed bulbar symptoms of vomiting and inability to swallow. Contact was made by Dr. J.K., and the information on treatment was given by telephone. This treatment was instituted immediately, and within 48 hours the patient was able to eat and drink without any difficulty. No transcript of the hospital record was given, but a short note was sent to me by Dr. K., stating that the temperature had stayed normal for 10 days. The patient then developed respiratory failure and cardiac failure. The pulse became rapid and shallow, and the patient died within 3 hours of the onset of collapse.

5. Daughter of Mr. Charles Minto, Edinburgh, Scotland. Acute upper spinal poliomyelitis.

Treated at the University of Edinburgh Hospital. Diagnosis proven by spinal tap. Treatment of intravenous aureomycin and amigen instituted and carried out as described. Report received 7 days later, stating that the child had responded to the treatment and fully recovered.

6. J.L.; 16-mos.-old female; bulbar poliomyelitis with facial paralysis.

Patient had symptoms of 2 days' duration with nausea, vomiting, and inability to swallow. There was a ptosis of the right eyelid and marked distortion of the face due to right facial paralysis. W.B.C. 29 (P-1 L-28). Total protein 34.

Patient was given 400 mg. aureomycin daily plus nutrient enemas and within 48 hours was conscious and walking around the crib. There was complete relief of nausea, vomiting, and dysphagia. The right facial paralysis gradually disappeared over 6 weeks' time. The patient has remained normal up to the present time. Total hospital stay 12 days.

7. D. Dev.; 9-year-old white female; acute poliomyelitis; bilateral lower extremity paralysis.

Dr. Maletz of the Neurology Department found a paraplegia affecting the lower extremities, knee jerks, absent ankle jerks. She had urinary and rectal incontinence. He and 3 members of the Orthopedic Service confirmed the diagnosis of poliomyelitis. Lumbar puncture, 1st day—W.B.C. 12; total protein 103; culture negative. Lumbar puncture, 2nd day—W.B.C. 23; total protein 76; culture negative.

Because her hospital condition had become much worse over the 7 days following admission, this treatment was instituted. Patient received aureomycin and amigen treatment for 6 days. Within 12 hours the painful spasms of her lower extremities had disappeared completely. Within 3 days she was moving her legs from the toes to the hips. On the 4th day the patient had regained rectal and urinary control. At the end of 1 week, she was moving her legs freely without any pain. On the 10th day following the institution of treatment, the patient was allowed out of bed walking. She was discharged home on the 20th day. Over a period of a year and 3 months, she has had no residual weakness or muscle atrophy.

8. H.K.; 30-year-old white female; acute anterior poliomyelitis.

This patient was admitted with moderate complete quadriplegia and involvement of the entire trunk including the neck and spinal respiratory muscles. Spinal tap—W.B.C. 168 (P-40% L-60%). Total protein 74. Attempt was made to treat her with intravenous aureomycin and amigen without a respirator, but she progressively had more severe respiratory symptoms and complained of blurring of her eyesight and double vision. She became cyanotic and disoriented and on the 3rd day was placed in a respirator and given oxygen. The intravenous therapy of aureomycin and amigen was continued as described. During this entire time, the patient received physiotherapy, hot packs, and support for prevention of deformity of extremities.

Patient took fluids and soft solids by mouth from the time of admission throughout her illness. Aureomycin and amigen treatment was continued for 10 days. The patient was released gradually from the respirator, beginning on the 10th day after its use. On the 20th day, she was allowed out for 4 hours daily. One month after admission, she was out of the respirator 12 hours daily. Hence, all her waking moments she was out of respirator and only placed in the respirator while sleeping. Patient was released from the respirator 7 weeks after its use was instituted. She was then placed on a hospital fracture bed and gradual rehabilitation of both lower and upper extremities and trunk was instituted. She was placed in a brace which supported her neck, trunk, and both lower extremities three months after admission and was allowed out of bed daily at that time. During the last 3 months, the patient has been out of bed walking daily with braces which support her back and both lower extremities. She walks in a walker with a minimum of two people aiding her

because of her residual severe right leg involvement. The prognosis is for excellent recovery of all but her right lower leg.

Summary and Conclusions In a series of approximately a hundred cases, we have had 10 patients in 1949 and 13 patients in 1950 with results which differ considerably from our former experiences. A detailed account of this specific treatment has been given. No contraindications for the treatment have been noticed. Cases of encephalitis and of bulbar poliomyelitis seem to respond more completely and rapidly than do lower limb poliomyelitis. This treatment has no effect on flaccid extremity paralysis but when given in the acute spastic stages, one can be assured of complete recovery of the muscles involved. It is definitely felt that the spread of paralysis of poliomyelitis is completely controlled within 48 hours. Although the series is small, the results still justify further trial.

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Clini-Clippings

Results of skin sensitivity tests to determine allergen in hay fever. a. — (negative), b. ± (doubtful), c. + (slight), d. ++ (moderate), e. +++ (marked).

From Larkowski and Rosanova's "Hospital Staff and Office Manual."

Medical Fallacies

Dead, Dying and Not So Dead

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The hardest job facing the modern doctor is not the desperate illness in the poor risk patient, nor the control of polio or alcoholism, nor even the solution of the growing threat of political domination. On the contrary, I dare say his heaviest assignment is the rat race he must run with the investigator and researcher to keep abreast of modern medical progress.

And even if he masters the new gadgets and digs into the medical mysteries of atomic fission, he chokes on the complicated formulas of chemistry and physics that are necessary to understand them. And when he tries to make use of the swarms of new specific synthetics buzzing about his befuddled head, he bangs smack into the final realization that nearly every scientific fact he learned in medical school has been the subject of recent and revolutionary revision.

The fact is we are now in a troubled period of medical confusion in which new material is being ground out of the research mills faster than anyone can absorb it. From past experience we know that much of it is seasonal and will be quickly discarded, but how can we select the wheat from the chaff? Take for instance the antispasmodics. Current literature describes at least a dozen—all different, all proposing to do the same thing, but each claiming superiority over its competitors. The same can be said for the antacid preparations proposed for treatment of ulcer; for the antihistaminics, useful in allergy, and the sedatives offered for control of the nervous states. Then there are the new advances in physiology and pathology that set aside the older explanations for altered function and tissue reaction, and introduce new concepts on which treatment must be based.

The physician facing this changing scene is tempted to express his pessimism and frustration in a Josh Billings quip that "it is better not to know so many things than to know so much that ain't so." And there is wisdom in the policy of some doctors who deliberately stay a certain distance behind the investigators to avoid the uncertainties of the experimental stage of the new advances.

But how far behind the front rank of the investigators is the safety zone and when does one become negligent and in danger of being trampled by the rear guard defending us from quackery and ignorance?

Perhaps the answer to this one will be found only in frequent stock-taking and in critical comparison of our own ideas with those of others who do the same thing. This requires much reading and scanning of medical literature, but above all else in importance is the idea of REVIEW and REVISION that must dominate us. We can never be satisfied with the knowledge or skill we have acquired: it is good for today but out of date tomorrow.

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"That's fine," chuckles almost any doctor who hears such a statement of his problem, "but where are we going to find the time it would take even to scan the mountains of medical literature rolling from the presses every year?" And when we turn to the library we see what he means. Here we find new books jamming the shelves and stacked on the tables awaiting their turn for review and catalogue numbers. And there are the journals, foreign and domestic, general and special, filed and piled all over the place for want of room. So in frustrated bewilderment we settle down to the realization that in addition to the increasing technical difficulty of our studies we have a mind-choking volume of it as well.

There must be answers to these questions, and we'll wager that the American doctor will find them—and soon. But while he is doing so, I should like to offer some simple homespun suggestions that may help:

1. Read more journal abstracts, symposia and summaries.

2. Scan carefully all your "throw-away" journals.

3. Look through your advertising literature for ideas.

4. Cancel your golf dates at the next medical convention and spend the time in section meetings.

By arranging the material to be discussed in this paper under the headings listed in the title, I hope to give some common examples of the need we all have for review and revision, and to point up the position I think the practicing physician should occupy, which was so cleverly and impressively stated many years ago by Alexander Pope,[1] when he said:

> "Be not the first by whom the new
> are tried,
> nor yet the last to lay the old
> aside."

Fallacies That Are Dead Bleeding and purging: In early American medical history a doctor who failed to bleed and purge for infectious disease might have been considered guilty of malpractice. The classic example was the venous exsanguination of General Washington as he lay dying of a malignant throat infection.

Medical treatment of appendicitis: Until John B. Murphy started his crusade of education in the diagnosis and surgical treatment of appendicitis, back in the eighteen nineties, thousands of cases were being unsuccessfully treated by medical means alone.

Digitalis and strychnine in shock: More recently—in fact within the memory of many of us—shock was mistreated with these drugs and the basic needs ignored. The new physiologic concept enables us now to save a large percentage of those who formerly died.

Medical Fallacies That Are Dying As we revise the physiology and pathology we learned in medical school a few years back, we find it necessary to give up some practices that once were standard and to question the validity of others. For example, we no longer advise the destruction of a growing skin tumor with cautery without a biopsy. Also we do not hastily embark on intensive treatment of a patient with a positive blood wassermann until we have established the diagnosis of syphilis. Other older ideas that are giving way to new concepts are:

That albuminuria always means nephritis.

That all convulsions are caused by epilepsy.

That a heart murmur always means heart disease.

That all strokes mean hemorrhage into the internal capsule.

That all urethral discharges are due to gonorrhea.

That all psychoses mean hopeless insanity.

That all pulmonary calcifications are due to tuberculosis.

That retroversion of the uterus inter-

feres with conception and that it may be the cause of various pelvic complaints that can be cured by surgical suspension.

That floating kidney or "dropped stomach" require either surgical suspension or bed rest with feet elevated for fattening treatment.

That "medical drainage" of the gallbladder with a Levin tube is an effective treatment for diseases of that organ.

Medical Fallacies—Not So Dead

In spite of published and established scientific evidence to the contrary, certain fallacious ideas keep cropping up to remind us that they are not so dead, after all. A few noxious examples are as follows:

That thyroid extract should be given to every patient with a low basal metabolism.

That hydrochloric acid should be given to correct anacidity of the stomach.

That pyorrhea alveolaris is a contagious disease.

That impacted wisdom teeth should be dug out of the mandible and removed to cure various disorders.

That iron and liver extract should be given together for anemias.

That colitis, arthritis, or neuritis are caused by focal infection.

That heart disease, rheumatism, nephritis, etc., may be prevented by tonsillectomy.

It is now well known that the basal metabolic rate alone is not adequate to indicate whether a thyroid gland is deficient. And yet there are literally tens of thousands of people—mostly women—in the United States who are taking the extract on this finding alone, whose glands are not deficient. If the normal gland is supplemented with thyroxin, its function is inhibited. If therapy is continued over a considerable period of time and then withdrawn there will be a lag of several weeks or months before the gland will respond to the stimulus of deficiency that exists during the withdrawal period. This fact, ignored, provides false evidence of further need of the extract because a test during this lag (physiologic deficiency) period will be reported low and the fallacy perpetuated. This state of affairs might be appropriately called thyroid addiction. Important points to remember are:

1. Thyroid extract is not indicated except in true deficiency of the gland.

2. Even in deficiency states only enough extract should be given to restore the deficiency. Usually this amount will not exceed a grain and a half daily.

3. Deficiency must be established by careful studies that should be confirmed —not determined—by the B.M.R.

Protests against the idea of acid replacement in stomach anacidity were published in 1933 by Bloomfield;[2] in 1938 by Bastedo;[3] and in 1943 by Kochler.[4] Chemical and physiologic studies reported by these authors brand the idea as completely fallacious, but still we find patients taking the dilute acid on prescription of their physicians.

Although we know the fusospirochetal organism, responsible for pyorrhea alveolaris, is capable of attacking tissue and is occasionally found in lung abscess, in which it may attain high virulence, we know also that it is found in almost every human oral cavity and that in the normal mouth it is harmless. It has been shown that in vitamin deficiency states such as pellagra and scurvy, and in starvation as in prison camp inmates, the gums give way and are attacked by this and other organisms, which would indicate that the disease may be produced by various mechanisms. In fact, it might be said that the organisms attack the gums much in the same way as the buzzard approaches its prey—that is, after it is dead.[5]

The focal infection theory of disease origin in the body was popular for many years. About 20 years ago the first scientific doubts as to its validity, in the wide application that was being made of it, began to appear in the literature. More recently the idea has been re-examined and

critically appraised with the result that a great deal of our medical literature has had to be rewritten. Holman in 1928;[6] Pemberton in 1936;[7] and Guyton and others in 1941[8] debunked the idea and trimmed it down to size, yet we still meet the victims of polysurgery and note the operating room waiting lists for tonsillectomy that testify to the deaf ears that have been turned to them. The facts, however, are as follows:

1. Disease organisms can enter the body through respiratory tract, skin, or gastrointestinal system, as well as through wounds, and other portals.

2. Surgical removal of tonsils, abscessed teeth, or other disposable or expendable organs or processes, offers very little or very limited protection against disease.

3. Statistics show that the tendency to rheumatism, nephritis, heart disease, arthritis, colitis, or neuritis is not reduced by tonsillectomy.

4. Rheumatic fever can be prevented by control of throat, nasal, or sinus infections with certain strains of streptococcus and related organisms—tonsils in or out, notwithstanding.

It is no disgrace to believe and practice a medical fallacy so long as the evidence is not conclusive, because we shall always be victims of the ignorance of the times in which we live. But any American physician who allows himself to be caught trying to keep alive a fallacy that is dead, that is dying, or even one that is not so dead as it should be, risks and deserves being buried with it in the limbo of the forgotten past.

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Neomycin in Virus Pneumonia and Tuberculosis

Drs. Elmer R. Kadison, Italo F. Volini, and Samuel J. Hoffman in the April 28 issue of the *J.A.M.A.* report on the use of Neomycin therapy in virus pneumonia, tuberculosis and diseases caused by gram-negative bacteria. Encouraging results from the use of Neomycin in thirty-one patients were reported. Advanced cases of lung tuberculosis and brucellosis did not respond as well. Various toxic effects were noted, among them one case of complete deafness in one patient. Two other patients with some loss of hearing improved when the drug was withdrawn. Because of the failure of the drug in far developed tuberculosis and the observed toxic effects the authors caution against indiscriminate use without proper assay of Neomycin blood levels and pending further detailed study.

Khellin in Angina of Effort

Drezner and Horoschak, writing in the March, 1951 issue of the *Journal of the Medical Society of New Jersey*, report that administration of khellin (Ammivin), 20 milligram enteric coated tablets, three or four times a day will effectively control angina of effort.

Fistula in Ano

Fistula in ano is a granulating ulcerous tubular tract lined with a pyogenic membrane forming an abnormal connection between the anal canal and the external surface or with the adjacent viscus, or it is a blind sac extending from the anal canal into the loose areolar tissue. This latter is in reality an ulcerating sinus. Accordingly one can distinguish the following types of fistulae:

A. Internal

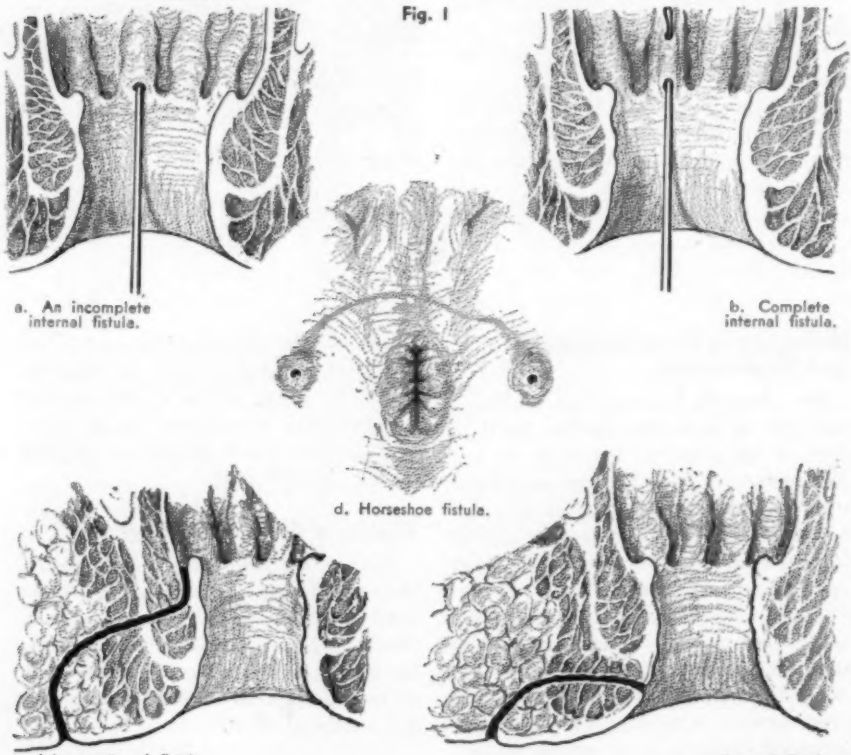
1. incomplete (one opening, usually at the ano-rectal line)
2. complete (one opening at the ano-rectal line, another above)

B. Combined or externo-internal (internal opening within anus, external opening on the skin)

1. Horseshoe (semicircular tract around the anus, external opening on one side, internal opening on the other side, or semicircular tract with external opening on each side of the anus and an internal tract into the anus)

C. External.

Fig. 1



a. An incomplete internal fistula.

b. Complete internal fistula.

d. Horseshoe fistula.

c. Interno-external fistula.

e. External fistula.

Diagnosis can be established 1. by the history, which includes an abscess followed by a thick malodorous discharge. (If the discharge is watery it is suggestive of tuberculosis.) 2. by external appearance of a pink or red circular elevation of the skin near the anus. (Fig. 2.) 3. by palpation of a firm fibrous cord extending toward the anal canal. 4. by proctoscopic visualization of the internal opening.

Treatment Only the simple direct fistulae, which have no tortuous tracts and the external and internal openings of which can be clearly identified, are suited for ambulatory treatment.

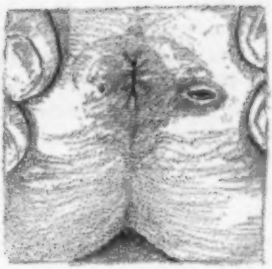


Fig. 2. External appearance of fistula.

FISTULOTOMY

Preoperative measures: Saline enema is given the night before the operation. (Enema on the day of the operation should be avoided as some liquid might be retained from it, which might later be discharged and might soil the field of operation.)

The patient is placed in the lithotomy position. The hairs around the anus are clipped close with scissors, but not shaved, as after shaving the growing hair causes discomfort in the anal region.

The sphincter is dilated gently without anesthesia. Fig. 3.

The anal region is cleansed with soap and water and painted with Tct. Iodine.

With the index finger in the anal canal a soft probe or a grooved director is introduced through the outer opening of the fistula and advanced gently until it emerges at the inside opening of the fistula at an infected crypt. Fig. 4 a, b and c.

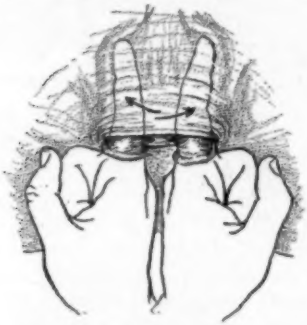
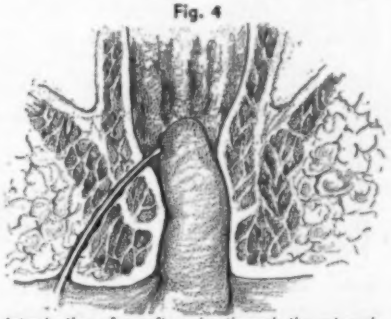
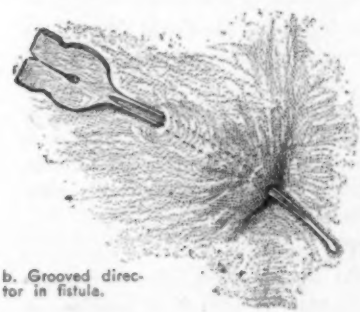


Fig. 3. Dilation of the sphincter ani.

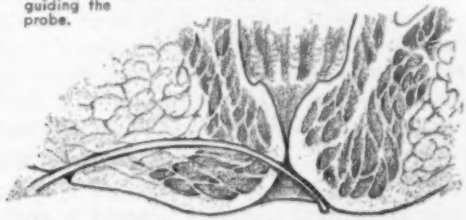
Fig. 4



a. Introduction of a soft probe through the external opening of the fistula. Finger in the anal canal guiding the probe.



b. Grooved director in fistula.

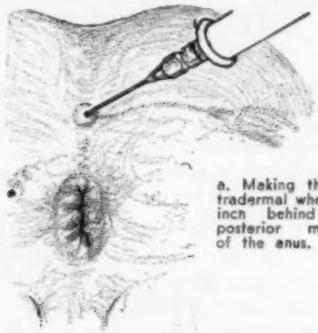


c. The soft probe is drawn outside the anal opening.

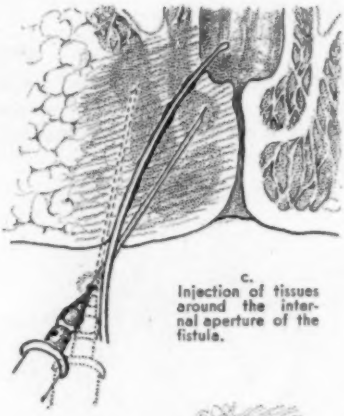
Anesthesia: At this stage one should infiltrate the tissues with a local anesthetic. Local anesthesia should not precede the introduction of the probe because the injection causes a distortion of the tract.

A wheal is made ½ inch behind the posterior anal margin by injecting 1% procaine with a hypodermic needle, then a 22 gauge 2½ inch needle is inserted into the wheal and while the needle is advancing parallel to and behind the long axis of the anus 10cc. of the solution is injected. The needle is withdrawn up to the wheal and directed forward towards the levator ani muscle on the side of the fistula. A second wheal is made just beyond the anal opening of the fistula and the tissues are injected on both sides of the fistula. Fig. 5.

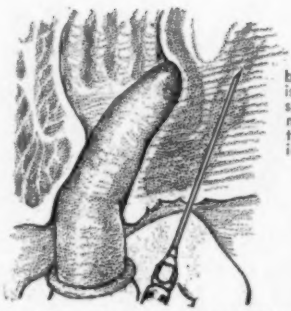
Fig. 5



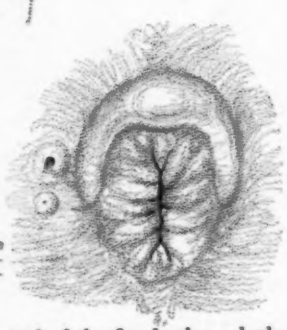
a. Making the intradermal wheal ½ inch behind the posterior margin of the anus.



c. Injection of tissues around the internal aperture of the fistula.



b. The left index finger is hooked around the sphincter, guiding the needle for injection of the anesthetic solution into the levator ani.



d. Appearance of the anus after completion of the injection.

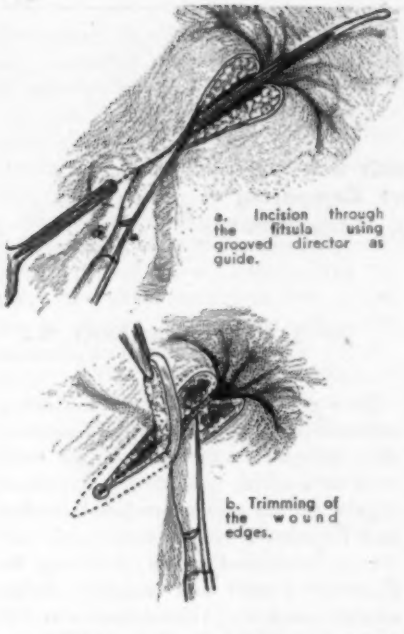
Incision: Incision is made beginning at the anal opening end of the fistula through the tissues to the grooved director. The edges of the wound are trimmed off in a wedge shape to prevent undermining. Fig. 6.

Care must be taken never to sever the tissues diagonally to the fibers of the sphincter ani. If the fistulous tract runs diagonally to the sphincter an incision is made first through the skin to permit change in the direction of the grooved director until it assumes a rectangular position to the fibers of the sphincter and only after this is accomplished is the incision made through the fistula. Fig. 7.

FISTULECTOMY

A probe is inserted into the fistulous tract to the tip of which, after it emerges from the internal opening, a hemostat is applied in order to hold it in position. A

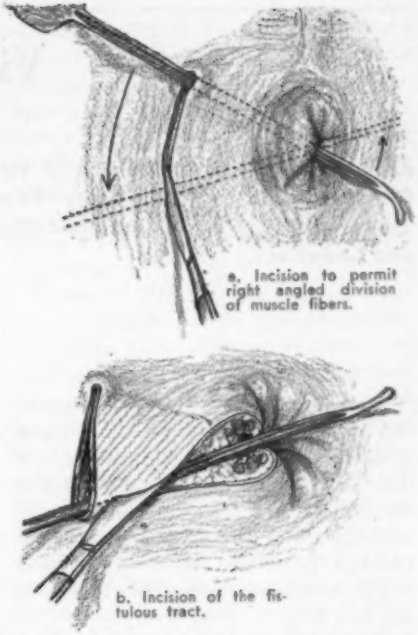
Fig. 6



a. Incision through the fistula using grooved director as guide.

b. Trimming of the wound edges.

Fig. 7



a. Incision to permit right angled division of muscle fibers.

b. Incision of the fistulous tract.

superficial incision is made on each side of the probe beginning at the anal orifice and extending slightly beyond the external opening. The incision is deepened beneath the fissure on both sides by turning the scalpel inward so that the entire tract of the fissure is excised in a wide angled V shape and the resulting wound is shallow. Fig. 8.

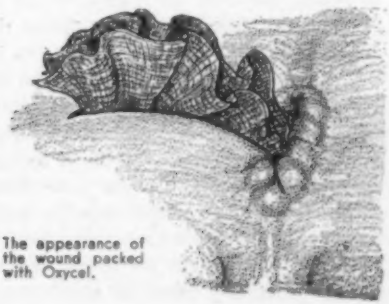
The wound is packed with Oxycel and hot boric acid solution is applied to it for 24 hours. Mineral oil is given twice daily.

After treatment: The dressing is changed after 24 hours and the packing is removed and not reinserted. Hot sitz baths are prescribed twice daily. Bowels are not allowed to move until the third day at which time a laxative is given. Hot sitz baths are continued twice daily until the wound heals. The patient remains under observation in uncomplicated cases for two weeks. The wound heals in 3 weeks. In some cases, however, it takes several months until complete healing takes place.

Fig. 8

Probe which passed through the fistula is held by a hemostat and superficial incision is made beginning at the anal end of the fistula. The incision is deepened with a knife held obliquely to the skin surface.

Fig. 9



The appearance of the wound packed with Oxycel.

Vitamin C

A Critical Review of the Use of Vitamin C in Allergic Disorders and a Preliminary Report Comparing it Therapeutically with Antihistamines, Antiasthmatics and Sedatives.

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The report by Hagelescu, of Bucharest, that ascorbic acid was deficient or absent in the urine of his asthmatic patients, and that clinical improvement usually followed the intravenous administration of ascorbic acid, has led to a considerable amount of investigation into the role of ascorbic acid in allergic disease, particularly in asthma and hay fever.

Several theories have been advanced in attempting to account for the reduced amounts of ascorbic acid in the urine and blood plasma of allergics and to provide a rational explanation for the clinical improvement noted by many observers when ascorbic acid therapy was employed.

Hochwald reported that he was able to reduce the incidence of anaphylactic shock in sensitized animals by the intravenous administration of ascorbic acid before reinjection of the sensitizing protein. He attributed this effect to the reduction potential of ascorbic acid. In an attempt to repeat the work of Hochwald and to evaluate his theory, Schaefer[1] found the reduction in the incidence of shock to be 14%, a figure which he claimed to be within the limit of experimental error. Upon administering oxidized ascorbic acid (20% unoxidized), he found no significant difference in results from those obtained with unoxidized ascorbic acid. He concluded that the reduction potential of ascorbic acid could not be the carrier of any protective effect in anaphylaxis.

Over a period of four years, Holmes and Alexander[10] made occasional observations indicating a lowering of the body level of ascorbic acid during hay fever attacks. On the assumption that histamine may be inactivated by ascorbic acid and that an additional supply of it may be necessary to react with histamine during allergic states, they administered ascorbic acid to 25 hay fever patients. When a daily dose of 200 mg. or more was administered, about two-thirds of those reporting were clinically improved.

The antihistamine effect of ascorbic acid on isolated bronchiolar lumen was investigated by Ruskin.[19] The results indicated conclusively, he reported, that it is an effective histamine antagonist.

In another article, Ruskin[16] advanced the theory that there is a definite relationship between histamine sensitivity and adrenal cortical insufficiency, with accompanying depletion of the sodium ion and of ascorbic acid. On the hypothesis that nasal allergy and asthma may be precipitated by an imbalance of the triad cortical hormone-sodium-ascorbic acid, he made a study of the effect of sodium ascorbate,

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particularly in those allergic states that were somewhat refractory to high dosages of ascorbic acid. The results of the study indicated that sodium ascorbate was much more effective than ascorbic acid in relieving the symptoms of nasal allergy and of asthma.

Maynadier[2] reviewed the difference of opinion concerning the antianaphylactic powers of ascorbic acid. He pointed out that, since anaphylaxis does not account for all of the symptoms of asthma, suprarenal insufficiency undoubtedly being a factor, and since suprarenal insufficiency and ascorbic acid insufficiency are parallel, it is possible that the clinical improvement observed following ascorbic acid therapy might be due to its ability to overcome suprarenal insufficiency.

In the light of present knowledge, it is not possible to evaluate these and other theories that have been offered to explain the action of ascorbic acid in allergic disease. It is to be hoped, however, that the parallelism between ascorbic acid deficiency and adrenal insufficiency will be thoroughly explored. Since the adrenal is the body tissue richest, by far, in ascorbic acid, it may be that allergic response is due to malfunction of the adrenal, such malfunction being caused by depletion of its ascorbic acid.

Study of the literature reveals sharp differences of opinion regarding the therapeutic value of ascorbic acid, among clinicians who have employed it in the treatment of allergic disease. Some report nearly all subjects improved, some to the point of complete remission of symptoms. Others report no improvement, or so little that the treatment is not justified. The brief summaries that follow by no means include all of those published, but they may be taken as typical.

Maynadier[2] reported 11 cases, children from 5 to 13 years of age, all of whom had a history of severe asthma of long duration, not amenable to the usual methods of treatment. Ascorbic acid was administered daily by intravenous route, the usual dose being 100 mg. Treatment was continued for 20 days, in a few instances, 30 days. In most of the cases, the series was repeated after a rest of from two weeks to a month. In nine of the cases, considerable alleviation or complete remission of symptoms was secured. In the other two cases, treatment was not completed.

Goldsmith, Ogaard, and Gowe[3] determined the blood plasma level of ascorbic acid in the general clinic population, excluding those with allergies and those with deficiency diseases. They found it to vary from 0.07 to 2.40 mg.% with a mean value of 0.60 mg.% (approx.). Thirty-two patients with allergies were chosen for study. Of 29 with bronchial asthma, 17 also had hay fever, and 4 had urticaria. Of the remaining three cases, two had hay fever alone and one had urticaria alone. All were adults, 28 white females, 2 white males, 2 Negro females. The ascorbic acid mean level for the 29 asthmatics was 0.41 mg.% (approx.). The difference between this and the mean level for the general clinic population was 2.7 times the probable error, which might or might not be significant. The test cases were given oral doses of 200 mg. daily for several days, and were then placed on a daily dose of 100 mg. Treatment was continued for several months. Seven members completed the treatment. Six of the 7 were unable to maintain a level of 1.0 mg.%, while all of the members of a control group were able to maintain that level. This may be interpreted as indicating an increased requirement of ascorbic acid in patients with asthma. In 2 of the 7 who completed treatment, there appeared to be some relationship between the blood level of ascorbic acid and the frequency and severity of attacks of asthma. In the 5 other patients, there was no appreciable improvement.

Diehl[4] treated an unspecified number of bronchial asthmatics with 300 mg. of

ascorbic acid daily via the intravenous route. The duration of treatment was not disclosed. A few of the cases were completely refractory. Several were unmistakably benefited, in most instances after protracted treatment. It was found that no improvement resulted in those cases where a deficiency of ascorbic acid did not exist. One patient who had a long-standing refractory vasomotor rhinitis was completely relieved at once when treatment began.

Hunt[6] selected 25 subjects with bronchial asthma, all out-patients, 16 females, 9 males, 5 children. No determinations of urinary ascorbic acid were made. The subjects were given 50 mg. tablets of ascorbic acid, one tablet to be taken each morning and one each night. No marked improvement in any of the cases was noted. Five patients were given "massive" doses of ascorbic acid by injection. One was given one intramuscular dose of 500 mg.; 3 were given one intravenous dose each of 400 mg.; and one was given one intravenous dose of 800 mg. None received any benefit "within 25 to 30 minutes."

Shaw and Thelander[7] advanced the hypothesis that ascorbic acid deficiency may be responsible for allergic states in children. They suggested that the human infant offers the best subject for study of the problem. No cases were cited but the authors stated that they had been giving 25 mg. routinely after the first few days of life and had noted a reduction in the incidence of colic.

Wagner[8] noted ascorbic acid deficiency in the urine of the mother of an infant with eczema. Ascorbic acid was administered to the mother and the infant's eczema was relieved. There was a relapse when the mother discontinued therapy. Six other cases were treated successfully, but in these, the ascorbic acid was administered to the infants. The author reports other cases: several itching exanthemas in older children, one of seborrhea of the scalp in an adult male, another of fissured hands. All were relieved by the administration of ascorbic acid.

Kogan and Bogdanova[9] determined the urinary ascorbic acid in 20 patients with bronchial asthma and in 3 control persons. All of the asthmatics had low excretion of ascorbic acid. It was particularly low during attacks, even to the point of parallelism with the gravity of the attack. Up to 600 mg. were administered daily but the saturation point was not reached in the asthmatic patients. The authors believe that, although a disturbance in the metabolism of ascorbic acid is not specific for bronchial asthma, there are pathogenic relationships between such disturbances and the allergic nature of the disease.

Holmes and Alexander[10] administered ascorbic acid to 25 hay fever patients, 13 of whom were deficient in urinary ascorbic acid. When 100 mg. were given daily for one week, 5 were improved of 16 reporting. When 200 mg. were given on the same schedule, 12 were improved of 14 reporting. The dosage was increased to 500 mg. and 8 out of 12 were improved. One subject was given one dose of 1000 mg. and experienced immediate relief.

Hebald[13] administered ascorbic acid to 10 patients with ragweed hay fever during the 1943 season. Nine received no other treatment, one also was given ragweed extract. The daily dose was 500 mg., half being given in the morning, and half in the evening. Five of the patients received this treatment for 3 weeks, the other 5 for 4 weeks. Eight of the subjects apparently received no benefit, two seemed to be improved. The author concluded that ascorbic acid is not an effective form of treatment for hay fever.

Engelsher[14] treated 48 hay fever patients with a divided dose of 500 mg. of ascorbic acid, for a period of two weeks. It was the opinion of the author that the treatment was of little, if any, benefit.

In a paper reporting no case histories, Korbsch[15] claimed that ascorbic acid in doses of up to 1 Gm. daily will alleviate

the symptoms of acute and secondary rhinitis. He further asserted that he has obtained complete remission of symptoms of the common cold after one intravenous injection of ascorbic acid in high dosage.

Ruskin[16] reported 8 cases of allergy treated with sodium ascorbate. Five of the subjects had hay fever, two had asthma and one had a nasal allergy of unknown origin. All of the subjects were improved, some to almost complete remission. Two of the subjects had proved refractory to previous therapy with ascorbic acid. The author expressed the opinion that sodium ascorbate was more effective than ascorbic acid in allergic states.

Newbold[17] selected 8 hay fever patients, all of whom were skin sensitive to extract of short ragweed. He injected the extract intradermally into each and measured the diameters of the wheals. Ascorbic acid was administered for three days and the test was repeated. No significant differences in the diameters of the wheals were noted. The author concluded that ascorbic acid therapy has little effect on the skin sensitivity of hay fever sufferers.

Friedlaender and Feinberg[18] determined the ascorbic acid blood levels of 48 hay fever subjects and found all levels to be within the normal range. A daily dose of 500 mg. of ascorbic acid was administered for periods varying from one to 6 weeks. All ascorbic acid blood levels were increased, but only 3 subjects reported clinical improvement. The authors discussed the difficulty in evaluating the results of hay fever therapy because of variation in the concentration of pollen geographically, seasonally, and daily, plus the response of the individual, aggravation of symptoms by cold and rain, and the influence of psychic suggestion.

Ruskin[19] called attention to the changing ideas concerning the dosage of ascorbic acid, doses of 1000 mg. now being rather common, contrasting with the much smaller doses employed in the early days of ascorbic acid therapy. He reported the therapeutic trials of tablets containing ascorbic acid and thiamin hydrochloride. These tablets, in a number providing 750 mg. of ascorbic acid and 3 mg. of thiamin hydrochloride daily, were given to 27 hay fever patients. The patients were divided into two groups: group A, numbering 16, received tablets only: group B, numbering 11, received the tablets plus desensitization. Twenty-four patients reported definite improvement. Of 12 of the 27 who were also asthmatic, 8 were improved. Of 14 who had food allergies, 11 were improved.

Pelner[20] pointed out that food allergy may produce clinical syndromes other than those gastro-intestinal in nature, e.g., migraine, asthma, and eczema. In discussing the treatment of gastro-intestinal allergy, which is largely unsatisfactory, he noted that ascorbic acid in large doses, 500 mg. or more per day, may detoxify a minor allergen, but could not be expected to detoxify a food to which the subject is overwhelmingly allergic. Eliminating the food and giving ascorbic acid seemed to produce the best results in this form of allergy.

Ruskin[21] reported the results of sodium ascorbate treatment in 13 hay fever patients, 7 of whom also had asthma. The dosage ranged from 1 Gm. to 2 Gms. daily. All of the patients were improved, several to the point of complete remission of clinical symptoms.

A careful study of these and other reports of therapeutic trials of ascorbic acid in allergic disease reveals several circumstances that might explain the differences of opinion as to its worth. One of these is the apparent influence of the dosage employed. Although there are exceptions, most of the favorable reports are those of trials in which the higher dosages of ascorbic acid were employed. The dramatic results obtained when dosages of from 750 mg. to 2 Gm. per day were employed indicate that some of the earlier

failures may be attributable to inadequate dosage.

The results of those investigations in which the urinary or blood levels of ascorbic acid were determined indicate, in general, that the greatest benefit may be expected from ascorbic acid therapy in those patients whose levels are considerably below normal. It is possible that some of the therapeutic failures reported were due to the inclusion of subjects who were not deficient in ascorbic acid. A third possible explanatory circumstance is the failure of most of the reporting clinicians to employ other therapeutic measures in support of the ascorbic acid therapy. In any scientific investigation, it is proper to reduce the variables to a minimum. It might well be, however, that ascorbic acid therapy alone could be inadequate in an allergic syndrome but adequate if supported by the concurrent administration of other substances of proved value in the treatment of allergic disease.

On the basis of the latter possibility the author undertook the study of the effectiveness of combinations of ascorbic acid with agents that have been found useful in mitigating the symptoms of allergy.

One hundred and thirty-one patients with a variety of allergic diseases, excepting allergic asthmatic bronchitis, and who had secured a measure of relief from the symptoms of their allergy through administration of antihistamines, were given combinations of an antihistamine and ascorbic acid. Seventy-four members of the group received tablets containing 25 mg. of Thephorin* and 200 mg. of ascorbic acid. Fifty-seven received tablets containing 2 mg. of Chlor-Trimeton** and 250 mg. of ascorbic acid. A subsequent paper will elaborate on the results of this therapy. For the purposes of this paper, however, it may be said that the ascorbic acid appeared to have a potentiating effect on the antihistamines. Almost without exception the subjects reported better and longer lasting relief from symptoms when a combination of antihistamine and ascorbic acid was used. In most instances it was possible to increase the interval between doses, thus reducing the incidence of side effects.

Since asthmatic bronchitis, both the allergic type and the chronic variety of obscure etiology, is relatively unresponsive to antihistamine therapy, the author attempted to determine if ascorbic acid in the form of the sodium salt would also increase the effectiveness of antiasthmatic drugs. Sodium ascorbate was used because it does not cause gastric distress as ascorbic acid often does and the reports of Ruskin and others indicate that the sodium ion may be essential to the utilization of ascorbic acid by the adrenal. Ninety-nine asthmatics, most of whom were chronic sufferers from the disease, were used in the study. Previous to commencement of the experimental therapy, all had used with variable control of symptoms a combination of theophylline, ephedrine and a barbiturate. Each member of the group was given a supply of T-Bardrin† Capsules and was instructed to take one capsule at the onset of symptoms and to repeat at intervals of four hours until the symptoms were controlled. Each of the capsules contained 195 mg. theophylline, 8 mg. ephedrine, 8 mg. sodium pentobarbital, 8 mg. sodium phenobarbital and 300 mg. sodium ascorbate.

A detailed analysis of the results of the experiment will be presented in a later paper. For the purposes of this preliminary report it may be said that this form of antiasthmatic therapy far surpasses any other within the author's experience. No member of the experimental group failed

* Clinical material furnished by Hoffmann-La Roche Inc., Nutley, New Jersey.
** Clinical material furnished by Schering Corporation, Bloomfield, New Jersey.

† Clinical material furnished by Angier Chemical Company, Inc., Boston, Mass.

to receive a considerable measure of relief, and in many cases the remission of symptoms was apparently complete. Perhaps the most striking result was the reduction in the quantity of medicament necessary to control symptoms. Some patients had previously ingested such large amounts of antiasthmatic drugs that the side effects had forced the discontinuance of therapy. Most of these were able to remain symptom-free by taking one of the experimental capsules per day. In addition to providing more prompt relief than the other types of therapy ordinarily employed in bronchial asthma, the combination of drugs represented by T-Bardrin usually evokes a pronounced sense of euphoria in the patient, a most important factor in the management of this type of disease.

Summary and Conclusions

A review of the literature on the use of ascorbic acid in the treatment of allergic disease revealed conflicting opinions regarding its value, although the weight of evidence seemed to be in its favor. Careful study of the data submitted indicated that the lack of success reported by some clinicians may have been the result of inadequate dosage and the failure to use adjunctive therapy in support of the ascorbic acid.

On the basis of these possibilities, the author undertook the study of the effect of combinations of ascorbic acid and antihistamines in the treatment of a variety of allergic diseases other than allergic asthmatic bronchitis. One group of subjects received tablets containing 200 mg. of ascorbic acid and 25 mg. of Thephorin. Another group received tablets containing 250 mg. of ascorbic acid and 2 mg. of Chlor-Trimeton. The results indicate that the combination of ascorbic acid and antihistamine is much more effective than antihistamine alone. Relief is more prompt and the duration of effect is prolonged. Through the reduction in the quantity of medicament necessary for the control of symptoms, the incidence and the severity of side effects are lessened.

Because the antihistamines are relatively ineffective in the treatment of asthmatic bronchitis, whether of the chronic or the allergic type, it was decided to investigate the usefulness of a combination of ascorbic acid with drugs that had been found of value in this disease. A number of subjects were given capsules of T-Bardrin containing 195 mg. theophylline, 8 mg. ephedrine, 8 mg. sodium pentobarbital, 8 mg. sodium phenobarbital and 300 mg. sodium ascorbate. The latter was used instead of ascorbic acid in order to avoid gastric distress and because the sodium ion may be necessary for utilization of ascorbic acid by the adrenal.

This combination gave much more prompt and longer lasting relief than had been obtained using similar combinations but without sodium ascorbate. Smaller and less frequent doses were required, thus minimizing the incidence and severity of side effects. A pronounced sense of euphoria was experienced by many of the subjects, probably because of the diminished quantity of medicament, particularly the barbiturates, required for the control of symptoms.

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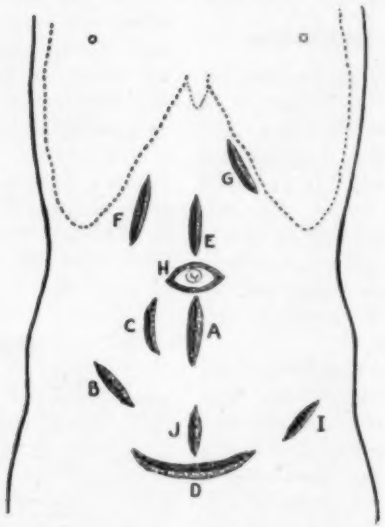
Clini-Clippings

SURGICAL INCISIONS



A. Low Midline—good exposure—used in laparotomies and pelvic work.
B. McBurney—for appendectomy.
C. Right Rectus—for appendectomy, used on females as it provides for pelvic exploration.
D. Pfannenstiel—for bladder work, gives good cosmetic result.
E. Upper Midline—for exploration of upper abdomen.
F. Upper Rectus—for gallbladder, spleen and kidney cases.
G. Right or Left Costal—for rib work.
H. Elliptical or Transverse—for umbilical hernia.
I. Right or Left Inguinal—for inguinal hernia.
J. Suprapubic—low midline for cystotomy or prostatectomy.

From Larkowski and Rosanova's "Hospital Staff and Office Manual."

EDITORIALS

Phenobarbital and Synthetic Vitamins Are Not the Answer

When President Theodore Roosevelt censured Lieutenant General Nelson A. Miles, hero of several wars, for criticizing the findings of a naval court of inquiry, there was an emotional response on the part of the people of a nature somewhat resembling that on the occasion of President Truman's disciplining of General of the Army Douglas MacArthur. The popular response prompted a shrewd comment by Roosevelt. He said: "We are a queer, emotional and hysterical people on occasion."

No better or more accurate appraisal and characterization could be offered by a trained psychiatrist. Theodore was a wise Roosevelt, something that could not be said of every member of the tribe.

From a medical standpoint the sources of our neuroticism are interesting to trace. Suffice it to say here, they are mainly cultural and genetical. No doubt the sexual frustrations and conflicts of the American milieu, in and out of marriage, and the milieu's general tempo, are contributing factors.

Our emotional suppressions and explosions throw considerable light on the genesis of such things as peptic ulcer in individuals and international tensions on the governmental level.

Phenobarbital and synthetic vitamins are not the answer.

A Possibly Significant Item in the News

On April 13 The Associated Press reported that an escaped mental hospital patient, impersonating a Maine state Senator, addressed the Ohio House and Senate on April 11 and also, on the same day, sat in on a session of the Senate Taxation Committee. He was finally identified as one Paul Snow, of Biddeford, Maine. His remarks were said to have deeply stirred the legislators.

While this episode was presented by the press as news, may it not, as a matter of fact, represent a frequent occurrence? Do not the weird performances of our legislators, especially the Federal breed, suggest that participation of mental hospital "delegates" happens oftener than has been hitherto suspected? The inference seems inescapable.

The Spread of Infection to Ireland

We have wondered a good deal concerning the infective effect of British socialism upon the near neighbor, Ireland. It appears that there has been an effect in that a plan for free medical service for all mothers and children is a bone of contention. The plan was promulgated by Dr. Noel Browne, former Health Minister. This plan has been blocked so far as being of a totalitarian character and not at all in accord with the character

of the Irish people. Browne was forced to resign by the opposition of the medical profession to the giving of aid by the state to mothers and children who could afford to pay. At any rate, the Costello Government is teetering to a fall on this issue, which has split the politicians.

The infection has revealed the basic soundness of the Irish character and its resistance to disastrous ideologies.

Jitters of the Hierarchy

In the heyday of general practice, before the hijacking and bombing of this field of medicine by neoplastic hordes of specialists, the skill attained by family doctors within the range of that day's knowledge was oftentimes something to marvel at. In particular, we recall the amazing versatility of many practitioners, who were as adept in intubating the larynx as they were in promptly identifying a ruptured ectopic pregnancy. One familiar with the old set-up has to smile when he hears and reads about the fears of the specialist hierarchy regarding the danger of the G. P. going beyond his capabilities in the course of his present-day hospital integration and the hierarchy's wish to restrict him to "the lowliest medical tasks." They may well fear the immense aptitude of the general practitioner, not his lack of capability. In the light of his history, the future belongs to him. Compared to the general practitioner at his best the specialist is a crude and extremely limited variation from the true medical norm.

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Succinylsulfathiazole and Glutamic Acid Excretion

Glutamic acid excretion in the urine of rats fed a basal diet was 2,130 micrograms a day, those fed a basal diet plus 1 per cent succinylsulfathiazole was 11,000 micrograms, and those fed the basal diet plus 1 per cent succinylsulfathiazole plus 4 micrograms of folic acid per Gm. of diet was 1,490 micrograms a day. The increased output of glutamic acid was generally noted before granulocytopenia or loss in weight occurred. After granulocytopenia arose treatment with 20 micrograms of folic acid per Gm. of diet reduced the average excretion from the high of 11,000 to 2,370 micrograms per day. Bakerman, Silverman and Daft reported in *J. Biol. Chem.* [*188*:117 (Jan. 1951)] that the decrease in glutamic acid excretion following treatment was accompanied in every instance by a return of leukocyte and granulocyte counts to a normal level.

Therapeutic Use of Terramycin in Amebiasis

Divided doses to a total of 1 or 2 Gm. a day were given orally for 10 days to 22 patients with colonic amebiasis caused by *Endamoeba histolytica.* Among 12 patients whose stools were examined daily, the parasites disappeared within 3 days with stools remaining negative for 1 to 93 days following treatment, with the exception of 1 patient who relapsed. The other 10 patients all had four negative smears 14 to 17 days after treatment.

Most and VanAssendelft also stated in *Ann. N. Y. Acad. Sci.* [*53*:427 (Sept. 15, 1950)] that the antibiotic eliminated *Endolimax nana* in 7 of 9 cases and *Iodamoeba butschlii* in 2 cases. However, terramycin was not effective against the parasites in 4 with hookworm, 4 with *Trichuis trichuria,* 2 each with *Giardia lamblia, Schistosoma monsonii, Hymenolepis nana* and *Strongyloides stercoralis,* and 1 with *Trichomonas hominis.*

GYNECOLOGY

HARVEY B. MATTHEWS, M.D., F.A.C.S.*

Granulosa-Cell Tumor of the Ovary

M. Haines and I. Jackson *(Journal of Obstetrics and Gynecology of the British Empire*, 57:737, Oct. 1950) report 40 cases of granulosa-cell tumor of the ovary collected from the London Hospital and the Chelsea Hospital for Women. The youngest patient in this series was three years of age; this was the only case in which the tumor developed before the age of puberty; there were 9 patients in the "reproductive" group, i. e. between the onset of puberty and the beginning of the menopause; there were 11 cases in the menopausal group; and 19 in the post-menopausal group. The chief symptom in 21 cases was uterine bleeding, including 12 in the post-menopausal group; pain was the chief symptom in 14 cases, and was a secondary symptom in 11 other cases. Swelling of the abdomen was present in 8 cases and in 6 of these was due to ascites. In nearly all cases a pelvic swelling was found on examination. In 7 cases bilateral tumors were present; the right ovary was involved in 18 cases and the left ovary in 13 cases. Ten of the 40 patients could not be traced; in the 30 cases traced 13 have died, 12 of these from local occurrences or distant metastases, one of heart failure; of the 17 patients surviving 3 have local recurrences; in one of these cases, the recurrence occurred three years after operation; in the other 2 cases nine and fifteen years respectively after operation. Of the surviving patients only 7 are alive and well five to fifteen years after operation. In 9 of the 12 patients who died of local recurrence or distant metastases, it was possible to give an unfavorable prognosis at operation, because of the presence of adhesions, metastases or ascites, or, in 5 cases, histologic evidence of malignancy. The youngest patient with definite evidence of malignancy was fifteen years of age, but all others were forty-four years of age or over. In patients under forty years of age, unless there is definite evidence of clinical spread of the tumor, a conservative operation may be done. In women over forty years of age with granulosa-cell tumor of the ovary the authors advise a radical operation—removal of both ovaries and total hysterectomy. While deep x-ray therapy was used postoperatively in some of the cases in this series, the results do not indicate that granulosa-cell tumors of the ovary are radiosensitive.

COMMENT

Granulosa-cell tumor of the ovary may occur at any age. The authors report 40 cases whose ages ranged from 3 years to post-menopause. These tumors are rare. Clinically they are diagnosed as ovarian tumors—cystic or solid. After removal, their gross anatomy may be suspected by the observant surgeon; final diagnosis, however, depends on microscopic findings. Some are malignant; the exact percentage is not known. The question of treatment is difficult. In younger women, unless there is gross evidence of malignancy, the management should be conservative with careful follow-up for many years. In older women, 40 or more, radical extirpation of all generative

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organs is indicated. X-irradiation is contraindicated since it has been pretty well established that granulosa-cell tumors of the ovary are not radiosensitive. Truly these cases are "whizzers". The surgeon is "playing with fire" and your commentator advises total hysterectomy with double salpingo-oophorectomy whenever this operation can be performed with good conscience. Certainly this should be done routinely in the older group.

H.B.M.

The Use of Radioactive Cobalt in the Treatment of Carcinoma of the Cervix

A. C. Barnes and associates *(American Journal of Obstetrics and Gynecology,* 60: 1112, Nov. 1950) report the use of radioactive cobalt in the treatment of 40 cases of carcinoma of the cervix. The radioactive cobalt employed (cobalt-60) has a half life of 5.3 years, its beta radiation can be easily filtered out, and its gamma radiation is homogeneous. For treatment of carcinoma of the cervix radioactive cobalt needles are employed, which are held in position by a series of plastic plates (templates). The patients in this series were first given external x-radiation (2000 r over an anterior and over a posterior field). Of the 40 patients treated, only one was in clinical Class I; 15 were in Class II; 16 in Class III; and 6 in Class IV. All of these patients had been treated previously, but in 10 cases, the treatment was considered inadequate. Early in the series, approximately 16 needles were used and treatment was completed in five days; later the number of needles was increased, the dose per needle being reduced, and duration of treatment was extended to seven days. With the first technique there was a "definite incidence" of bowel disturbances—diarrhea and tenesmus, but with the later technique, the incidence of these symptoms was reduced. An indwelling catheter was employed during the period of treatment, and bladder complications were few. The systemic reactions were much the same as in patients receiving a corresponding dose of radium, measured in tissue roentgen doses. Three patients in the series died within a few weeks after the course of treatment; all were in an advanced stage of the disease, and in one, death was due to a pulmonary metastasis. Five patients died five to eleven months after treatment; autopsy in 4 of these showed conditions ranging from little change in the pelvic cancer to "a relative absence of actively growing neoplasm," as in patients treated with radium. With the technique developed, these studies indicate that "an evenly distributed pattern of radiation," designed to fit the patient's pelvis and the extent of the lesion in each case, can be obtained with the use of radioactive cobalt in the treatment of cancer of the cervix.

COMMENT

Dr. Barnes and his associates are the first to use radioactive cobalt in the treatment of cancer of the cervix. They have endeavored to develop a technic for the application of radioactive cobalt which would adequately replace the more expensive and less readily available radium in the treatment of cervical carcinoma. On the face of it they have succeeded admirably but what may be the outcome after 5 years is another question. We hasten to congratulate the authors on the ingenuity, patience and meticulous workmanship that they have shown in developing a technic which undoubtedly is not perfect but apparently quite adequate for the use of radioactive cobalt in carcinoma of the cervix. Read this most interesting article which details to you a "first" in the quest for another possible cure of cancer of the cervix.

H.B.M.

Estrogen Therapy by Implantation of Estradiol Crystals

G. T. Kimball *(American Journal of Obstetrics and Gynecology,* 60:661, Sept. 1950) reports the use of a method of implantation of estrogen crystals in the treatment of severe estrogen deficiency in 40 women, 55 per cent of whom had menopausal symptoms. The preparation used was Micropellets Progynon, crystalline estradiol, given by intramuscular injection of an aqueous suspension. The aqueous menstruum is rapidly absorbed, so that the "minute" crystals of pure hormone are left in the tissues from which absorption is uni-

form and prompt. The dosage used was 0.5 to 2 mg. (average 1.0 mg.) given once a week. All patients showed some favorable results, and in 75 per cent good to excellent clinical results were obtained; vaginal smears showed 10 to 20 per cent cornification in response to therapy. The hormone level in the blood was well maintained by this method of implantation therapy and did not show the fluctuations noted when estrogen is given by oily injections. The majority of the patients (75 per cent) had had previous hormone treatment by other methods, and their response to the implantation therapy was both more prompt and more satisfactory. Breast sensitivity and other signs of overdosage were minimal.

COMMENT

Using the vaginal smear method the author found, in a group of 40 cases that showed estrogen deficiency or/and menopausal symptoms, that 75 per cent of these cases showed excellent results by the injection of micropellets Progynon. Weekly injections of 0.5 to 2 mg. (average 1 mg.) were found sufficient. Prolonged action is attained because, since micropellets Progynon are an aqueous solution of estradiol, the water is quickly absorbed leaving crystals of estradiol to be slowly absorbed from the injection site. In our experience this and similar routines have seldom seemed necessary. We use the usual mouth preparation of pure estrogens or a conjugated type of estrogens which, in our hands, seems to "do the trick". Naturally close supervision of the patient is always in order. Where the physician cannot trust the patient to return for routine check-up this method of implantation of estrogen crystals is to be recommended. Let's try simple measures first; the complicated ones may not be necessary.

H.B.M.

The Early Diagnosis of Cancer in Women

E. S. L'Esperance *(Bulletin of The New York Academy of Medicine,* 26:703, Nov. 1950) reports that at the Strang Prevention Clinics of the New York Infirmary and Memorial Hospital, 26,076 apparently healthy women have been examined in the last twelve years. At the New York Infirmary 2.1 per cent and at the Memorial Hospital 1.3 per cent were found to have cancer. Of the 142 cases of cancer at the New York Infirmary 96 were cancers of the breast and 22 cancers of the pelvic organs, and of the 258 cases of cancer at the Memorial Hospital 86 were cancers of the breast, and 161 cancers of the pelvic organs and female genitals. The examination at these Prevention Clinics includes a thorough physical examination, fluoroscopic examination of the chest and a pelvic examination, including vaginal and cervical Papanicolaou smears. A manual rectal examination is made in all cases, a proctosigmoidoscopic examination of all patients over forty, and a roentgenoscopic survey for gastric cancer on all patients over forty-five. All patients over forty-five are asked to return every six months for examination and those under forty-five once a year. The cytologic smear examination of vaginal and cervical secretions (Papanicolaou method) has proved of great value in the early diagnosis of cancer of the cervix and corpus uteri; any positive or "suspicious" smear is confirmed by punch biopsy. In 1949 when this method was developed and routinely used at the Clinics, the incidence of cancer of the cervix for the first time was greater than that of cancer of the breast. The smear method has not been found to be so valuable in diagnosis of cancer of the breast except in papillary adenocarcinoma near the nipple, with a definite discharge.

COMMENT

The early diagnosis of cancer in women by the use of Papanicolaou smears is a well recognized routine. By this method, coupled with "circular" biopsy in the least suspicious Papanicolaou smear, an early diagnosis can really be made. Prior to this routine, early diagnosis was not really "early" because, merely on palpation, what was deemed early by one man was decidedly late by another examiner. If all physicians, but particularly those doing gynecology, became "cancer conscious" and really applied this method for early diagnosis in all suspected cancerous lesions anywhere in the body, our cancer results would be greatly improved. The slogan "fight cancer with knowledge" would then be working. Early diagnosis is still our only chance of cure. Become "cancer conscious"!; if you never look for cancer

you will never find it—early enough to be of full benefit to the patient.

H.B.M.

The Effect of Penicillin Vaginal Suppositories on Morbidity in Vaginal Hysterectomy

S. J. Turner *(American Journal of Obstetrics and Gynecology,* 60:806, Oct. 1950) reports the use of penicillin vaginal suppositories in 100 consecutive vaginal hysterectomies. The suppository used was cocoa-butter containing 100,000 units of crystalline potassium penicillin G; it was inserted deeply into the vagina the night before operation. In this series of 100 cases, there were no deaths, and only 7 patients (7 per cent) showed a febrile morbidity; in 3 cases this was due to a cystitis, which was successfully treated with urinary antiseptics or sulfonamides. The average hospital stay was 9.8 days. In a previous series of 56 vaginal hysterectomies in which the operation was done by the author with the usual method of preoperative preparation of the vagina, the morbidity was 37.5 per cent; and the average hospital stay was 11.8 days. In a series of 200 vaginal hysterectomies done at the same hospital without penicillin suppositories, there was a 34.8 per cent morbidity, and an average hospital stay of 11.2 days.

In the cases of vaginal hysterectomy reported in the literature, the morbidity varies from 26 to 42 per cent. A study of vaginal cultures in 53 cases before any vaginal treatment was given and twelve to fourteen hours after a penicillin suppository had been introduced (just before operation) showed that in the post-penicillin cultures pyogenic cocci had been "almost completely inhibited." The studies show that penicillin vaginal suppositories employed preoperatively are of definite value in reducing postoperative morbidity in vaginal operations.

COMMENT

Heretofore vaginal hysterectomy has not been too popular in America. However, for the past ten years the trend has shifted so that at the moment vaginal hysterectomy is more frequently performed. Although the mortality rate for vaginal hysterectomy is very low, less than 2%, the morbidity is far too high (26 to 40%). Dr. Turner has sought to lessen this high morbidity rate by, in addition to the usual preoperative vaginal preparation, the use of a vaginal suppository containing 100,000 units of crystalline potassium penicillin G in cocoa butter placed deep in the vagina the night before the operation. By this means he was able to reduce his 37.5% morbidity in 56 personal cases to 7% in a series of 100 cases. This is little short of marvellous! We have no personal experience with this penicillin suppository regimen but intend to begin its use. It sounds reasonable.

H.B.M.

OBSTETRICS

HARVEY B. MATTHEWS, M.D., F.A.C.S.*

The Present-Day Safety of Cesarean Section

L. F. McLean and associates *(American Journal of Obstetrics and Gynecology,* 60: 860, Oct. 1950) reports a series of 1,192 cesarean sections, at the Millard Fillmore Hospital, Buffalo, N. Y., without a maternal death. These cesarean sections were done in a period of from Nov. 16, 1945 to Aug. 17, 1949, during which time there were 14,591 deliveries. The operation was of the low cervical type in 503 cases, classical type in 606 cases, Porro in 65 cases, and extraperitoneal (Latzko technique) in 18 cases. The procedure was classified as

* Emeritus Professor of Obstetrics and Gynecology, State University of New York (State University Medical Center at New York City College of Medicine); Consultant in Obstetrics and Gynecology, Long Island College Hospital, Methodist Hospital and Lake Placid General Hospital; Diplomate of American Board of Obstetrics and Gynecology.

an emergency operation in 293, and as an elective operation in 899 cases. The fact that the classical cesarean operation was done more frequently than the low cervical type is attributed to the fact that in cases of borderline pelvis and/or cephalopelvic disproportion, a test of labor is not prolonged beyond twenty-four hours, and infection did not occur frequently before operation. In 19 cases cesarean section was done before the fetus was viable, the chief indications being placenta previa, abruptio placentae and toxemia. In the cases in which the child was viable, the chief indications for section were cephelopelvic disproportion and previous cesarean section. In 12 cases cesarean section was done because of the danger of erythroblastosis fatalis, the mother's blood having shown a constantly rising liter. Blood, typed and cross-matched, was always available for transfusion at the time of cesarean section, and transfusions were given to 570 of the patients in this series, although 427 received only 500 cc. Penicillin was not given prophylactially in all cases, but was used in 316 cases. The chief factors in rendering cesarean section "an increasingly safe procedure" are earlier intervention in cases where the test of labor indicates that progress is not satisfactory as determined by qualified specialists; and availability and liberal use of whole blood transfusions and antibiotics. At the Millard Fillmore Hospital, the use of a "recovery room" has also contributed to the safety of delivery both abdominal and vaginal. In the recovery room all women are kept for eight hours after delivery, under the constant care of a specially trained nurse, who notifies a resident obstetrician immediately of any unusual alteration in the patient's condition; this has reduced the maternal death rate from hemorrhage "to the vanishing point" at this Hospital.

COMMENT

During the past 40 years the safety of cesarean section has progressively improved. There have been numerous contributing factors, chief of which, we contend, is the improvement in teaching both at the undergraduate and postgraduate levels. Without this impetus few of the many clinical methods and plans that have actually lowered maternal and fetal mortality, in general as well as in the field associated with cesarean section, would have been conceived. Amongst the more important of these are: more adequate prenatal care; x-ray pelvimetry in order to more accurately diagnose cephalopelvic disproportion; improvement of surgical technic; the advent of chemotherapy and the antibiotics and blood transfusion. The author and his associates are indeed fortunate —perhaps a little lucky—in not having a death of a single mother in 1192 cesarean sections. We know of no larger series without a mortality. Their indications for section in this series may be challenged but their judgment and operative technic certainly are beyond criticism. We offer our sincere congratulations!

H.B.M.

Postpartum Blood Loss:

An Analysis of 6,000 Cases

J. K. Vant *(American Journal of Obstetrics and Gynecology*, 60:483, Sept. 1950) in a previous review of 2,000 obstetric cases at the University of Alberta Hospital, found the measured blood loss at delivery to be 323 cc. with a loss of 600 cc. or more in 314 cases (15:4 per cent). In his review of the present series of 4,204 cases at the same Hospital, the measured blood loss is found to average 219 cc., with a loss of 600 cc. or more in only 180 cases (4.3 per cent). The diminution in the blood loss at delivery in the second series is attributed to various factors, among which are improved prenatal care, with special attention to the patient's weight gain and blood picture; and a more careful study of the pelvic capacity in relation to possible cephalopelvic disproportion. In the management of labor the use of ergonovine in the third stage of labor in the recent series of cases has resulted in shortening this stage and reducing blood loss. Another factor of importance in the management of labor is the use of less heavy sedation during the earlier stages of labor and the inauguration of early ambulation, which would not have been possible with the previous sedation routine.

COMMENT

The debate on the proper management of the third stage of labor has been going on for about as long as physicians have been doing obstetrics. There has been considerable improvement, in so far as blood loss is concerned, during the past 10 or 15 years. This became imperative, because hemorrhage was fast becoming the prime reason for obstetric mortality. Infection or toxemia no longer held first place. Many series of studies similar to those made by the author have shown, among other things, that the average accoucheur had no idea of the amount of blood that was lost during the third stage of labor. The idea of accurately measuring this blood loss belongs to Dr. J. B. Pastore, who also stated that a blood loss of more than 1 per cent of the weight of the patient must be considered a postpartum hemorrhage. These discoveries, coupled with a more intensive study of the causes of postpartum blood loss and measures for combating them, have reduced the incidence of postpartum hemorrhage to a considerable degree. This incidence is still too high. Why? Because, like some other problems in obstetrics, the accoucheur does not or cannot handle the third stage of labor as well as he should. Of course, there will always be that irreducible mortality rate in obstetrics caused by hemorrhage; but "eternal vigilance" could make this rate lower than at present. This is exactly what Dr. Vance and the University of Alberta Hospital group have done. "More power to them" and every other group that is trying to reduce postpartum blood loss!

H.B.M.

The Common Medical Indications for Therapeutic Abortion

W. E. Studdiford *(Bulletin of The New York Academy of Medicine,* 26:721, Nov. 1950) classifies the various indications for therapeutic abortion as ovular, gynecologic, and systemic, the latter including two groups—antecedent disease in which pregnancy is an added hazard, and conditions specifically related to pregnancy. Among the ovular indications for the termination of pregnancy is "obvious" degeneration of the ovum following embryonic or fetal death (hydatidiform mole). Major congenital anomalies occurring in infants born of previous pregnancies are not, as a rule, indications for the termination of subsequent pregnancies, unless, as rarely occurs, all children born are afflicted with such a major anomaly. Since the discovery of the Rh factor as a cause of fetal death, another possible indication for therapeutic abortion is recognized, if the father is Rh-positive (homozygous) and the mother is Rh-negative with serologic evidence of sensitization and a history of recurrent "fetal disaster," therapeutic abortion appears to be indicated in subsequent pregnancies. Recently also the frequent occurrence of congenital anomalies when the mother has rubella in the first three months of pregnancy has suggested the possibility of therapeutic abortion in such cases. In the author's opinion therapeutic abortion in such cases is justified in young women, but in older women with little chance of a subsequent pregnancy, he considers it "better policy" to gamble on the embryo being "unaffected." Among the gynecologic indications, uterine fibroids are to be considered if they are large (uterus enlarged to more than the size of a four months' pregnancy), and liable to become degenerated and/or infected. In most cases in pregnant women, however, uterine fibroids are small, and do not increase the hazards of pregnancy or labor. If termination of pregnancy is indicated, total hysterectomy is the operation of choice. Ovarian tumors in pregnant women are usually benign but should be removed, preferably after the twelfth week. If the tumor is found to be malignant on pathological examination in the operating room termination of pregnancy by total hysterectomy and bilateral salpingo-oophorectomy is indicated. Cancer of the cervix, if clinically invasive, is also an indication for therapeutic abortion. Among the systemic indications for therapeutic abortion directly related to pregnancy, severe toxemia is rarely an indication, as it usually does not develop until the fetus is viable; but if it does develop in the second trimester termination of pregnancy is advisable. With modern methods of treatment hyperemesis gravidarum and pyelitis of pregnancy are rarely, if ever, indications for therapeutic abortion at present. There is

general agreement that heart disease (usually rheumatic heart disease) is an indication for therapeutic abortion only if the patient is in class III or class IV (functional classification). Hypertension *per se* is not regarded as an indication for therapeutic abortion, but if associated with heart disease or encephalopathy, termination of pregnancy is usually considered necessary. Pulmonary tuberculosis that does not respond to adequate therapy or is not "stabilized," if the patient is seen during the first trimester of pregnancy, is usually regarded as an indication for therapeutic abortion. Hyperthyroidism and diabetes are not usually indications for termination of pregnancy. If thyroidectomy has been done for hyperthyroidism, most surgeons advise that the patient should not become pregnant for two years, and if pregnancy occurs in this period, therapeutic abortion is indicated. Multiple sclerosis is not an absolute indication for therapeutic abortion, only if pregnancy occurs while the disease is in a stage of activity.

COMMENT

Since the time of Hippocrates medical ethics has decreed that the physician shall do nothing to shorten or destroy life but that he shall exert every effort to do the best for every patient that comes under his care. For these reasons, as the author states, the physician has frequently found himself in a dilemma when confronted with the problem of a pregnant woman with a complication that threatens her life unless the pregnancy is interrupted. The decision of whether or not to perform an abortion is a tough one from the medical, moral, religious and legal standpoints. As ethical physicians we must forever strive to be fair and honest, rendering an opinion only after thorough study of all phases of the problems involved. Your commentator can agree 100 per cent with the medical indications for therapeutic abortion that have been grouped by the author.

H.B.M.

A New Method of Quantitative Estimation of Cephalopelvic Disproportion

H. C. Moloy and C. M. Steer *(American Journal of Obstetrics and Gynecology*, 60: 1135, (Nov. 1950) describe a new method of estimating cephalopelvic disproportion and estimating the probability of safe delivery from below. The films taken include anteroposterior stereoroentgenograms made with a lumbosacral pad and slight elevation of the patient's shoulders to give a view of the inlet; a lateral film with the patient standing and a plastic centimeter marker fastened in the gluteal fold; and a film of the subpubic arch. At the Sloane Hospital for Women (New York), where the method is employed, the x-ray study is made early in labor and only when some disproportion is suspected. The stereoroentgenograms are studied in the precision stereoscope; the anteroposterior diameter, transverse diameter, and interspinous diameter are measured directly, the type of pelvis is determined, and the degree of fixation of the head is noted. The anteroposterior diameter of the inlet is also measured on the lateral film, with the gluteal fold marker, and the level of the head and characteristics of the sacrum are noted. For estimating disproportion at the inlet on the stereoscopic films, cardboard circles of known diameter are employed; with the pelvic image well visualized in the stereoscope, various circles, mounted on wooden handles, are tried, until one is found that fits the pelvic inlet; and the diameter of this circle is noted. A circle is then fitted to the image of the fetal head, perpendicular to the longitudinal axis of the head and in the plane of the biparietal or suboccipitobregmatic diameter, and the diameter of this circle is noted. The difference between the diameter of the pelvic circle and the fetal head circle is "the significant figure" in this method of measurement. In 911 cases in which inlet disproportion was determined by this method, it was found that cesarean section was indicated in 94 cases after a trial of labor. Trial of labor was terminated in those cases when repeated examinations showed that no progress was being made. Cesarean section was necessary most frequently when the difference between the

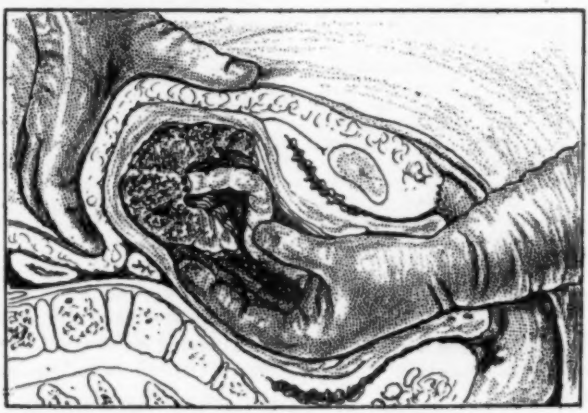
two measurements was 1.0 cm. or less—the "absolute disproportion" group, yet even in 10 of 58 cases in this group, delivery was from below, but there were 4 stillbirths, due to intracranial injury. As the difference between the pelvic inlet and fetal head diameters increases, cesarean section is found to be less frequently necessary. In the 752 cases in which the difference between the two measurements was 1.8 cm. or more, cesarean section was done in only 6 cases, in 5 because of uterine inertia and in one because of midpelvic disproportion. For measuring midpelvic disproportion, the measurement of the fetal head is determined by the circle, but this is subtracted from the measurement of various diameters, especially the interspinous diameter. When this difference is 1.0 cm. or less mid-forceps delivery is required in almost every case; as the difference increases, mid-forceps delivery is less frequently necessary. Cesarean section is rarely necessary because of midpelvic disproportion alone, unless there is also inlet disproportion.

COMMENT

The size and shape of every parturient's pelvis is, of course, important. However, of more importance, ofttimes, is the character of the uterine contractions and the size and mouldability of the presenting part, particularly the vertex. Therefore vaginal delivery in the presence of cepholopelvic disproportion cannot be predicted with certainty, no matter what method of x-ray pelvimetry is employed. This is not to say that x-ray pelvimetry should not be used for no one can deny its importance. After considerable experience with x-ray pelvimetry (not Caldwell and Moloy's technic), we have reached the conclusion that better results are obtained when obstetrician and roentgenologist work together, each having specific interest and knowledge to offer. At the time of measuring the pelvis (better, during labor), no one can say positively that "this baby will go through this pelvis". Only a test of labor can decide this problem; and no patient has had a test of labor unless the membranes are ruptured while the "test" is going on. Following a test of labor, cesarean section can be performed if vaginal delivery seems hazardous or impossible. We certainly agree with the authors that section is much safer, both for the child and the mother, than traumatic vaginal delivery. The problem of cephalopelvic disproportion is a troublesome one, requiring both the science and art of obstetrics for its solution. Good judgment coupled with a masterful operative technic is the "answer" for a good baby and a live mother. H.B.M.

✚

Clini-Clippings



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Edited by ROBERT W. HILLMAN, M.D.

MEDICAL BOOK NEWS

Pathology

Human Pathology. By Howard T. Karsner, M.D. 7th Edition. Philadelphia, J. B. Lippincott Co., [c. 1949]. 4to. 927 pages, illustrated. Cloth, $12.00.

This well known and standard textbook of pathology has now reached its seventh edition.

The new volume represents an extensive revision and modernization. New chapters on diseases of the eye and diseases of the skin have been added. Chapters on diseases of the liver have been rearranged and entirely rewritten in the light of current knowledge.

In addition, there has been a large number of new references and illustrations included. The arrangement of the subject matter on double space pages makes for convenient reading.

This book needs no recommendation by a reviewer. Suffice it to say that the new edition adequately maintains the reputation of the author in the field of pathology.

THEO. J. CURPHEY

Ward Administration

Ward Administration and Clinical Teaching. By Florence Meda Gipe, R.N. and Gladys Sellew, R.N. St. Louis, C. V. Mosby Co., [c. 1949]. 8vo. 357 pages, illustrated. Cloth, $4.25.

The authors have considered, and rightly so, the ward unit or private floor as the heart of the hospital, the place where the greatest impact of patient and hospital personnel occurs.

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JOHN J. MADDEN

Medical Jurisprudence

Attorney's Textbook of Medicine. By Roscoe N. Gray, M.D. 3rd Edition. In 2 volumes. Albany, N. Y., Matthew Bender & Co., [c. 1949]. 8vo. Cloth, $35.00.

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—Continued on page 390

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MEDICAL BOOK NEWS

—Continued from page 388

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S. INGRAM HYRKIN

Biography

Lives of Master Surgeons. By Richard A. Leonardo, M.D. New York, Froben Press, [c. 1948]. 8vo. 469 pages, illustrated. Cloth, $6.00.

This book consists of short "capsule" biographies of surgeons, listed alphabetically. It includes ancient and modern names and the author states in his preface that he has "tried to include the more important internationally famous surgeons". It is curious that with this objective, the name of Joseph Lister was omitted from the original volume and appears in a supplement along with John and William Hunter, Theodore Kocher, Sir James Paget, Samuel Gross, Paracelsus and others. The more so, since the original lists a number of rather obscure names. The book is valuable as a starting point for reference.

JOHN H. BOGLE

Internal Medicine

An Integrated Practice of Medicine. By Harold Thomas Hyman, M.D. Vol. 5. Progress Volume. Modern Developments in Therapeutics and Methods of Treatment. Philadelphia, W. B. Saunders Co., [c. 1950]. 8vo. PP. 4133-4867. Cloth, $10.00.

This Progress Volume considerably enhances the already great value of Hyman's *Integrated Practice of Medicine* by bringing it completely up to date. Every owner of this valuable set should own the progress volume.

MILTON PLOTZ

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MEDICAL BOOK NEWS

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Cerebral Palsy

Cerebral Palsy. By John F. Pohl, M.D. St. Paul, Minnesota, Bruce Publishing Co., [c. 1950]. 12mo. 224 pages, illustrated. Cloth, $5.00.

This small but well written and well organized book is presented in a very interesting style.

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CARMELO C. VITALE

Industrial Ophthalmology

Eyes and Industry. Formerly Industrial Ophthalmology. By Hedwig S. Kuhn, M.D. 2nd Edition. St. Louis, C. V. Mosby Co., [c. 1950]. 8vo. 378 pages, illustrated. Cloth, $8.50.

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LETTERS TO THE EDITOR

—Continued from page 52a

efficacy extends to the oral route of administration.

"We are further confronted by the paradoxical result that a pencillin adsorbate on an ion exchange resin, first made up in the hopes of yielding a slow elution in the digestive tract and a 'steady' blood level, was found in practice not to give any blood level at all, but nevertheless would produce just as rapid a resolution and defervescence in lobar pneumonia; indeed in some instances a more rapid response than that to be anticipated from parenteral penicillin.

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"Faced by the implications of this theory, we may take either of two alternative courses of action; we may discard it without further exploration in the entrenched belief that our present modes and application of antibiotic therapy are neither indiscriminate nor wasteful and that recent warnings of mass sensitization of our population, by current practices [*M. Rec. 163*:233 (Sept.) 1950: *ibid.* (Feb.) 1950], should be directed to the next generation. Or we may choose to determine the optimum conditions for the application of antibiotic therapy with the view to obtaining that maximum of benefit defined by the term, optimum. As I

—Concluded on page 56a

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REF.: 1) Jones, C. M., et al.: Ann. Int. Med. 29:1-10, July 1948
2) Becker, G. H., et al.: Gastroenterology 14:80-91, Jan. 1950

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LETTERS TO THE EDITOR

—Concluded from page 394

implied in my own article these may be entirely apart from the killing off of 'viruses' or elusive 'specific pathogens.' While this article was on press, one appeared in the *British Medical Journal* for February 24, 1951 by Drs. Foy, Kondi and Hargreaves. It detailed a remarkable response of a patient with megaloblastic anemia to a course of penicillin in which the writers were unable to elicit an 'infective' component. This type of response, which I can amply confirm, particularly to the newer, streptomyces-derived antibiotics, not only in megaloblastic anemia but in that of any myelosuppressive dyscrasia, seems first to have been competently observed in a locality (Uganda) where penicillin is nowhere widely used as in this country. American physicians have been using extensive antibiotic therapy for almost a decade. Their failure to properly recognize the indubitable hemopoietic powers of such therapy as well as the fact that the nutritive nature of antibiotics had first to be elicited accidentally in domesticated animals, indicates that there may have been some chauvinism in our own current attitude of omniscience on the subject. And if this is true, the sooner we adjust our thinking and our antibiotic therapy practices, the better."

Robert D. Barnard, M.D.
Laurelton, L. I., New York

LIKE M.T.

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1. Waters, E. G., and Wager, H. P.: Amer. J. Obstet. & Gyn. 60:885, 1950.

MODERN THERAPEUTICS

Use of ACTH and Cortisone in the Treatment of Pemphigus Vulgaris

Seven patients with pemphigus were treated with large doses of ACTH and/or cortisone. Two of the patients died. The other 5 patients were all greatly improved in the condition of their skin and in their general health. However, Cannon *et al* reported in *J. A. M. A.* [*145*:201 (Jan. 27, 1951)] that none of these 5 patients can be considered cured for all require treatment to prevent relapse. There also appears to be little evidence that these harmones have influenced the basic causative factor in this disease. Other treatment employed included bland local medicaments and baths; sedation; antibiotics to control secondary infections; whole blood transfusions, liver extract, and vitamin B_{12} in cases of anemia; and a low sodium diet when edema appeared.

Therapeutic Use of Histar in Dermatoses

Marked improvement through the use of Histar ointment, a new antihistaminic-tar compound, was reported in 71% of dermatoses patients treated at the U.S. Naval Hospital in Philadelphia, according to Commander John D. Walters, MC, U.S.N. and Captain Robert L. Gilman, MC, U.S.N. Simultaneously, relief of pruritus

—Continued on page 60a

For Better Weight Gain!

Chow[1] has shown that supplementation of a normal diet with Crystalline Vitamin B_{12} resulted in increased weight gain in both normal and chronically ill children.

Sol Dex provides crystalline Vitamin B_{12} in convenient drop dosage form containing 10 micrograms of Vitamin B_{12} per cc (approx. 20 drops). Easy to use, tasteless and colorless. Also available in scored tablets, each containing 20 micrograms of Vitamin B_{12}.

Available at pharmacies: LIQUID–15 and 30 cc bottles with special dropper. TABLETS–in bottles of 50.

[1]Chow, Bacon F., *J. Nutrition 43:323 (1951)*

ANOTHER FINE J. M. PRODUCT
MEYENBERG EVAPORATED GOAT MILK

For samples and further information write:

Jackson-Mitchell Pharmaceuticals, Inc.
SPECIAL MILK PRODUCTS
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—Continued from page 58a

accompanying dermatic conditions was experienced by 75% of patients using Histar.

Reporting in the *United States Armed Forces Medical Journal* (2:187), February, 1951, the Naval physicians observed the use of the antihistaminic-tar combination to be 20% more effective than tar alone, long considered to have therapeutic value in treating dermatoses. The efficacy of Histar is attributed to the synergistic action derived from crude coal tar (Tarbonis brand 5%) and the antihistamine substance (pyrilamine maleate 2%) when applied locally. In all, 52 cases were treated, with best results obtained in atopic dermatitis, neurodermatitis, psoriasis, and eczemas of various types. Previous treatment of patients ranged from 1 to 10 years, having afforded varying periods of relief with no extended clinical arrest.

ACTH Aids Dermatomyositis

ACTH administered intramuscularly has relieved the symptoms of an apparently incurable case of dermatomyositis, according to a report by Drs. Suzman and Rudolph of Johannesburg, South Africa, in the January, 1951 issue of *Lancet*.

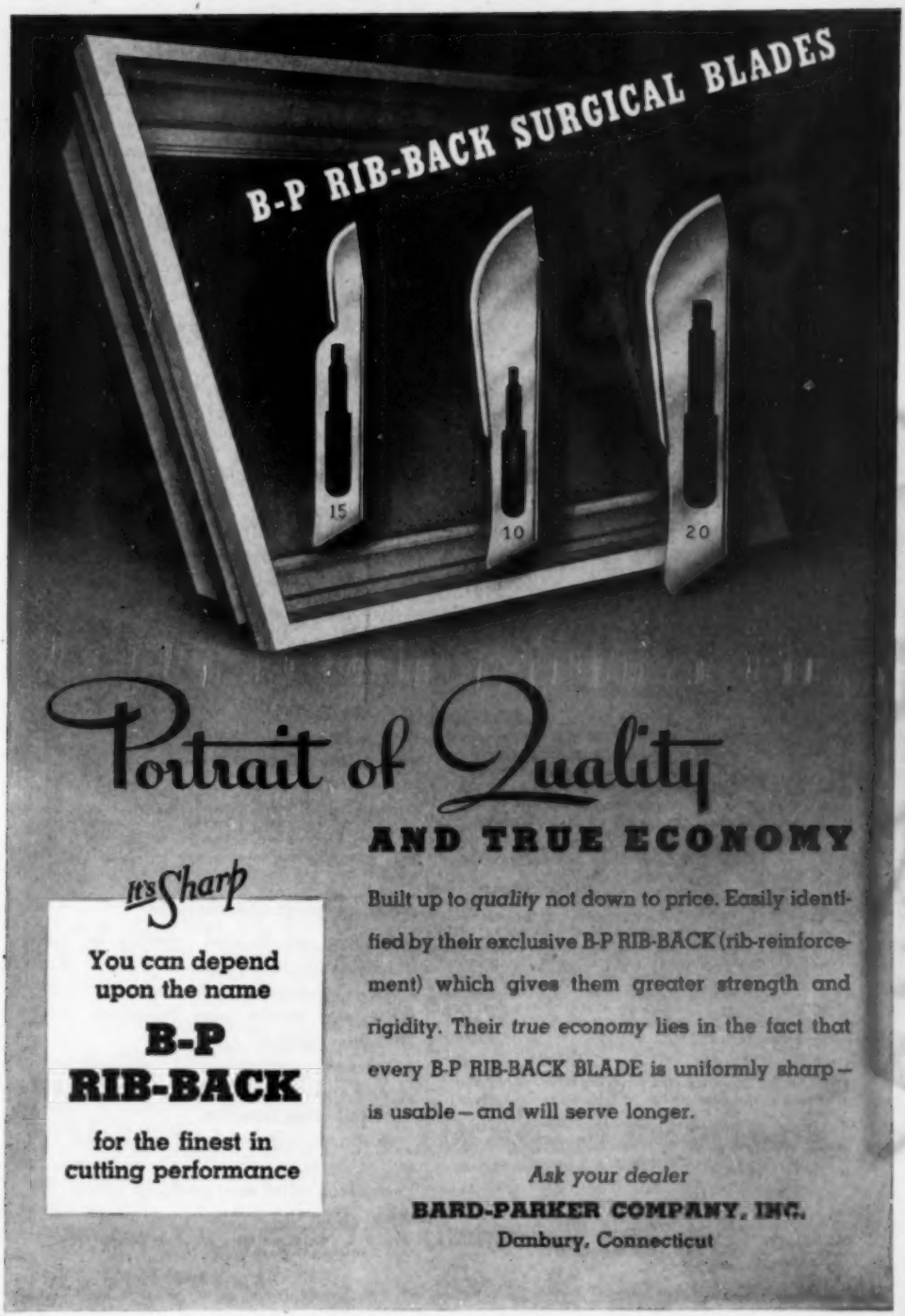
Penicillin, sulfonamides, salicylates and many other drugs had been tried in an attempt to relieve the condition, but had no effect.

The patient had been sick for 51 days prior to the administration of ACTH. He was extremely weak, was unable to raise himself unaided and could not move his arms or legs. His pulse was abnormally rapid as was his respiration rate. His temperature ranged between 100° and 103°.

Following three injections of 10 mg. of ACTH the patient's pulse and respiratory rate slowed up and his temperature dropped to normal. He could move his limbs and stand unaided.

A slight relapse occurred when the ACTH was withheld for two days during

—Continued on page 62a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Built up to *quality* not down to price. Easily identified by their exclusive B-P RIB-BACK (rib-reinforcement) which gives them greater strength and rigidity. Their *true economy* lies in the fact that every B-P RIB-BACK BLADE is uniformly sharp—is usable—and will serve longer.
Ask your dealer
BARD-PARKER COMPANY, INC.
Danbury, Connecticut

MODERN THERAPEUTICS

—Continued from page 60a

the third week of administration. However, the injections were resumed and after 99 days, in which the patient received a total of 860 mg. of ACTH, the drug was again discontinued. Since the discontinuation of therapy, 14 weeks ago, there has been no relapse.

Sulfathiazole Acid Jelly in Vaginitis

Writing in *Postgraduate Medicine* 9:220 (March, 1951), K. J. Karnaky reported favorable results using a sulfathiazole acid jelly (Westhiazole Vaginal) in vaginitis. Out of 169 case of *Trichomonas vaginalis* vaginitis results were good in 145 cases (86 per cent), fair in 9 cases (5 per cent). The jelly was of greatest value in acute and subacute vaginitis and cervicitis.

The vagina became dry after two or three days. "Itching and burning were controlled within 6 to 24 hours." The author considers the jelly to be nontoxic and nonirritant. Its advantages are simplicity and convenience, solubility in the vaginal secretions for maximum contact of medication with vaginal and cervical mucosa, acidifying properties sufficient to control primary infection, and sulfathiazole to clear up secondary infestations.

New Laryngospasmolytic

Sadove and Balagot, writing in the March-April, 1951 issue of *Current Researches in Anesthesia & Analgesia* report fairly good results using Trasentine as a laryngospasmolytic agent.

Trasentine, administered intravenously, seemed to take effect within 30 to 60 seconds following injection.

In the majority of the 115 test cases, 35 mg. of the drug relieved the laryngospasm. Permanent relief was produced mostly in cases of partial laryngospasm (laryngeal stridor). In the cases of temporary relief,

the relaxation was prolonged enough to permit the passage of an endotracheal tube.

Ion Exchange Resin in Hypertension

Groff, writing in the March 15, 1951 issue of the *New York State Journal of Medicine*, reports that blood pressure was lowered in six hypertensive patients by the administration of an ion exchange resin.

The resin was of the carboxylic type and was given in conjunction with a low salt sodium diet.

Priscoline in Peripheral Vascular Disease

From observation of seventeen cases of peripheral vascular disease, Wilson and Quash, writing in the March, 1951 issue of *The American Journal of Surgery*, report that Priscoline is a valuable adjunct in the treatment of the disease.

Priscoline administered intra-arterially and supported by oral therapy is effective in refractory leg ulcers prior to the onset of gangrene or established soft tissue necrosis, and in vasospasm whether due to trauma, the symptom complex of scleroderma or ulceration due to arteriosclerosis, diabetes or chronic thrombophlebitis.

Sulfonamide Cream in Postpartum Care

In the March 1951 issue of the *American Journal of Obstetrics and Gynecology* is an article entitled "The Use of a Multiple Sulfonamide Vaginal Cream in Postpartum Care." The paper was written by Dr. John M. Palm of the Clay County Hospital, Brazil, Indiana.

The paper discusses the use of Triple Sulfa Cream in the postpartum period on over 400 patients. Dr. Palm reports the following results:

1. "At no time was there a blood level (of sulfonamide) to produce systemic effects."

2. "In all cases, the cultures taken im-

—Continued on following page

—Continued from preceding page

mediately after delivery showed a minimal bacterial colony count. Those treated with the multiple sulfonamide cream (Triple Sulfa Cream) showed a markedly diminished count on the third and seventh days, while in the untreated cases there was an increased colony count on the third and seventh days. This demonstrated that the cream has a bactericidal effect much the same as has been shown to exist *in vitro*."

3. "The pH of the vagina of the treated patients remained relatively low, 5.5 to 6.5, while that of the untreated group more nearly approached pH 7.0 to 7.5."

4. With the use of Triple Sulfa Cream, "the incidence of postpartum endocervicitis was practically nil. Cervices after severely traumatic birth appeared almost virginal at the three month postpartum examination."

5. Following delivery Triple Sulfa Cream was carefully administered, by means of the measured dose applicator, high in the vagina and a small amount placed on the episiotomy. This was repeated twice daily while the patient was in the hospital. The remainder of the tube was given to the patient for home application.

Dr. Palm concludes as follows:

"Due to the effective use of a multiple sulfonamide vaginal cream in postoperative cases, it was thought that this cream might have a use in postpartum care.

"No systemic effect could be determined with its use post partum.

"There was a marked decrease in morbidity immediately post partum. Endocervicitis was practically nonexistent at

—Continued on page 66a

MODERN THERAPEUTICS

—Continued from page 64a

the six weeks and three months check-up.

"Since the original study and review of cases was begun, the use of the multiple sulfonamide vaginal cream has been added to the routine care of all patients delivered in our hospital. We feel that it is a definite addition to the postpartum care of the patient."

M-Minus 4 Therapy in Premenstrual Tension and Dysmenorrhea

Dr. Milton Vainder, writing in the April, 1951 issue of *Industrial Medicine and Surgery* reports on "Theory and Rationale in the Treatment of Premenstrual Tension and Dysmenorrhea." The syndrome of premenstrual tension includes the symptoms of mental depression, headache, breast tenderness, bloating, thigh pain, edema of the feet, general lassitude and irritability.

Among the theories suggested to account for the condition are excess female hormone, deficient ovarian luteinization with a decreased production of progestin, nutritional deficiency, and psychosomatic origin.

Physiologically it is generally accepted that an estrogen-androgen balance normally exists, controlled by anterior pituitary influence.

Just prior to menstruation there may be a change in the androgen-estrogen balance, with a resultant hyperestrogenemia, causing retention of extracellular fluid. The resulting edema explains the various symptoms. From experimental work, it is apparent that this is not a sodium-retention edema.

In this study, relief was provided with

—Concluded on page 68a

NEW...the first product of its kind

The Stuart Amino Acids

(SOLUBLE BEAD FORM)

A complete *oral* amino acids product containing all the amino acids (and only amino acids) in correct ratio to maintain nitrogen balance. The Stuart Amino Acids needs no digestion. It is bland in taste, readily soluble and completely non allergenic.

Although the Stuart Amino Acids may be used whenever there is a need for protein, there are certain situations where the use of Stuart Amino Acids has a *very special* value:

Pre-and post-operative conditions where a minimum of burden must be placed on the digestive system ➧ Cases of protein allergy and testing for suspected ingested allergies ➧ Peptic ulcers—the Stuart Amino Acids requires no digestion, provides the needed amino acids, and has a high antacid and buffering effect ➧ Massive amino acids dosage—bland taste and high solubility make massive dosage possible ➧ Whenever bulk, large food particles or roughage cannot be tolerated ➧ In some cases, to reduce the need for prolonged parenteral administration or repeated transfusions ➧ In tube feeding—high solubility permits massive dosage with smaller amounts of liquid without clogging.

ALSO NEW

all the amino acids plus B_{12} in tablet form

Stuart Amino Acids & B_{12}

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6-OZ. BOTTLES AVAILABLE AT ALL PHARMACIES

COMPLETE SECONDARY ANEMIA THERAPY
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The Stuart Hematinic with Folic Acid and B-12

CONTAINS BOTH FORMS OF B12

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Ferrous Gluconate for greater tolerance - Truly therapeutic amounts of B Complex and C - Liver fraction for natural B Complex factors - Copper - Tablet form for stability - Tablet form to release iron in the stomach at a desired rate for greater tolerance

ALSO AVAILABLE AT ALL PHARMACIES

THE STUART HEMATINIC
THE STUART HEMATINIC WITH FOLIC ACID
THE STUART HEMATINIC LIQUID

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the Stuart Company
CHICAGO, ILLINOIS

MODERN THERAPEUTICS

—Concluded from page 66a

M-Minus 4, a tablet combination containing 50 mg. of N, N-Dimethyl-N′-(2-pyridyl)-N′-(p-methoxybenzyl) ethylenediamine 8-bromotheophyllinate [pyrabrom] together with 100 mg. of acetophenetidin.

Results of previous investigations indicate that N, N-Dimethyl-N′-(2-pyridyl)-N′-(p-methoxy-benzyl) ethylenediamine 8-bromotheophyllinate functions as an antipitressin agent and that it may provide effective therapy in all water retention conditions in which pitressin is involved.

The medication was used in 153 cases displaying all, or most, of the symptoms of premenstrual tension.

Relief was uniformly good, all patients reporting at least some amelioration of the symptoms of distention, breast tenderness, and abdominal discomfort.

In 41 patients who had concomitant dysmenorrhea, 32 were completely relieved and nine were definitely improved. There was one patient in whom a diffuse macular rash occurred with disappearance on cessation of therapy.

The treatment is described as a rational therapeutic approach, combining ease of administration, economy, and safety with clinical effectiveness.

Liquid Nitrogen in the Treatment of Skin Diseases

Dr. H. V. Allington of Oakland California writing in the March 1950 issue of *California Medicine* reports that Liquid Nitrogen is a satisfactory freezing agent for warts and other skin conditions. One hundred fifty-four cases of warts were reported on. These were followed for from 4 to 15 months and showed an encouraging percentage of cures. The author concludes that the percentage of cures justifies the use of Liquid Nitrogen in selected cases of warts until some more specific treatment becomes available.

"It is not commonly realized that vitamins control the body's appropriation of minerals, and in the absence of minerals they can have no function. Lacking vitamins the system can make some use of minerals, but lacking minerals, vitamins are useless."

Bulletin of Florida State Department of Agriculture, No. 123, pp. 20-23.

This explains why multivitamins ofttime fail to produce favorable results.

VITERRA provides TRUE protection against nutritional deficiency by supplying both vitamins and minerals.

11 MINERALS
9 VITAMINS
in one capsule

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Cobalt	0.1 mg.
Copper	1 mg.
Iron	10 mg.
Iodine	0.15 mg.
Calcium	213 mg.
Manganese	1 mg.
Magnesium	6 mg.
Molybdenum	0.2 mg.
Phosphorus	165 mg.
Potassium	5 mg.
Zinc	1.2 mg.

Vitamin A	5,000 USP Units
Vitamin D	500 USP Units
Thiamine HCl	3 mg.
Riboflavin	3 mg.
Pyridoxine HCl	0.5 mg.
Niacinamide	25 mg.
Ascorbic Acid	50 mg.
Pantothenate	5 mg.
Tocopherols, Type IV	5 mg.

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NEWS AND NOTES

Awards Offered

The Foundation of the American Society of Plastic and Reconstructive Surgery offers Junior and Senior Awards for original contributions in Plastic Surgery.

Junior Award: 2 Scholarships in Plastic Surgery of 6 and 3 months respectively.

The contest is open to plastic surgeons in the specialty not longer than 5 years.

Senior Award: For the best essay on "Mass Treatment of Burns in Atomic Warfare."

The winning essays will appear on the program of the forthcoming annual meeting of the American Society of Plastic and Reconstructive Surgery to be held at Colorado Springs, Colorado, October 31—November 2, 1951.

All entries must be received by the Chairman not later than August 15, 1951.

For full particulars write to:

The Award Committee
c/o Jacques W. Maliniac, M.D.
11 East 68th Street
New York 21, N. Y.

Removal of Lung In Tuberculosis

An operation for removal of the lung or parts of the lung provides a hope for supposedly incurable tuberculosis patients, report Drs. J. S. Harter and A. J. Beland of Louisville, Kentucky.

The doctors reported at a meeting of the National Tuberculosis Association that 75 patients had been subjected to this surgery at Nicholas Veterans Hospital

—Continued on page 72a

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since October, 1946. There were three deaths out of the total of 75 operations.

The new operation seems to preserve the function of the lung better than the old method of temporarily or permanently collapsing the lung.

Cancer Deaths Highest in '50

Cancer deaths reached an all time high in 1950. An estimated 210,000 Americans died of the disease last year, according to the American Cancer Society's annual report. Some 70,000 of these might have been saved by early diagnosis and treatment.

The report states that, with early diagnosis and therapy, 98 per cent of skin cancers can be cured; 45 per cent of stomach cancers can be cured, (at present, only 4 per cent are actually cured); 80-90 per cent of breast cancers can be cured, (at present, only 35 per cent are actually cured); 85 per cent of rectal cancers can be cured, (at present, only 14 per cent are actually cured).

Mefford R. Runyon, in releasing the report, said that, while "the year 1950 saw forward strides in the treatment of cancer, in research, in the development of education and service programs, and a mounting cure rate in many forms of the disease . . . it was also a year that saw more cancer deaths than ever before."

To speed up diagnosis and treatment, the society is now conducting an educational campaign and a fund raising drive to raise $14,565,000.

Fund for Medical Education

Former President Herbert Hoover and E. Sloan Colt, president of the Bankers Trust Company, recently announced a

—Continued on page 74a

June Bride CLEARED HER PSORIASIS

RIASOL

By a tragic coincidence, the initial attack of psoriasis often appears during a woman's engagement period. Statistics show that 20 is the average age of onset.

Fortunately RIASOL is most effective when used early in the disease. There is no reason to postpone the marriage or break the engagement.

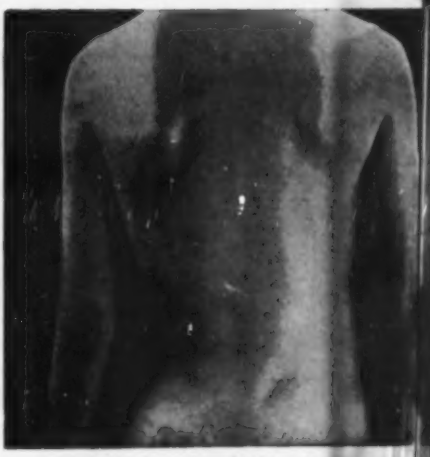
Based on clinical statistics, it is known that RIASOL clears or improves the ugly skin patches of psoriasis in 76% of cases. If applications are continued after disappearance of the lesions, remissions are often avoided in many cases.

RIASOL contains 0.45% mercury chemically combined with soaps, 0.5% phenol and 0.75% cresol in a washable non-staining, odorless vehicle.

Apply daily after a mild soap bath and thorough drying. A thin, invisible, economical film suffices. No bandages required. After one week, adjust to patient's progress.

RIASOL is ethically promoted. Available in 4 and 8 fld. oz. bottles, at pharmacies or direct.

Before Use of Riasol



After Use of Riasol

MAIL COUPON TODAY — TEST RIASOL IN YOUR OWN PRACTICE

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Please send me professional literature and generous clinical package of RIASOL.

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RIASOL for PSORIASIS

NEWS AND NOTES

—Continued from page 72a

drive to raise $5,000,000 to aid the nations medical schools.

Gifts totaling $1,000,000 have already been received.

Rising costs are putting an intolerable burden on our medical schools. It now costs about $10,000 over a four year period to educate each medical student. The medical schools are in desperate need of help and it is most important that aid come from private citizens, not from the government.

Mr. Hoover said that there is no doubt that there is a shortage of medical men in this country and that we must expand our medical education facilities to fill the need.

"We cannot leave all these things to government. If we do, the impulses of progress that constantly lift the standards of education in this country will be disastrously limited," he said.

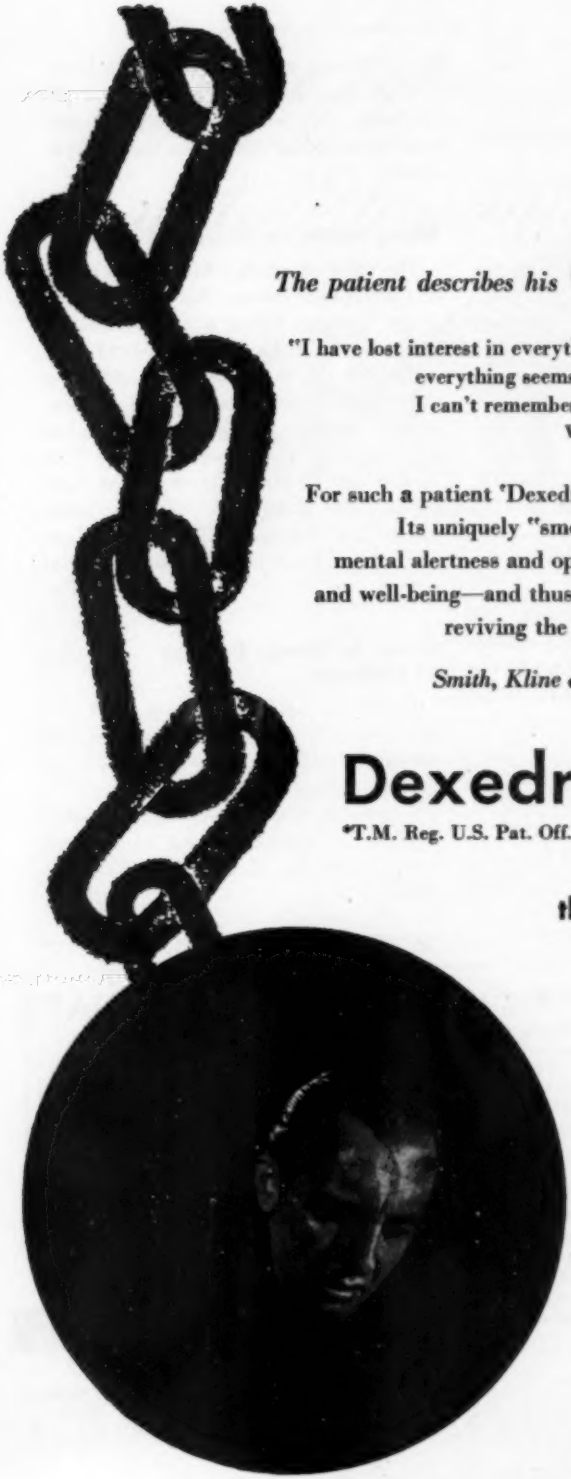
The meeting of the Fund organization was held at the Biltmore Hotel. Other speakers included James B. Conant, president of Harvard University; Dr. Elmer L. Henderson, president of the A.M.A.; William Green, president of the A.F. of L.; Philip Murray, president of the C.I.O., and Harold E. Stassen, president of the University of Pennsylvania.

Brain Surgery

Delegates attending the 185th meeting of the New Jersey Medical Society at Atlantic City were told that, as the result of brain surgery on 150 mental patients at the New Jersey State Hospital during the last three years, eighteen patients had been given complete discharges and thirty-nine others had been granted paroles of one year.

Surgery on the frontal lobe of the brain was credited with improvement in 77 per

—Concluded on page 76a



The patient describes his **depression:**

"I have lost interest in everything—I have no ambition any more—
everything seems futile—I feel frustrated and lonely—
I can't remember or concentrate—I am *all slowed up*."
Washburne, A.C.: Ann. Int. Med. 32:265, 1950.

For such a patient 'Dexedrine' Sulfate is of unequalled value. Its uniquely "smooth" antidepressant effect restores mental alertness and optimism, induces a feeling of energy and well-being—and thus has the happy effect of once again reviving the patient's interest in life and living.

Smith, Kline & French Laboratories, Philadelphia

Dexedrine* Sulfate

*T.M. Reg. U.S. Pat. Off.

the antidepressant of choice

tablets

elixir

NEWS AND NOTES

—Concluded from page 74a

cent of the cases. One elderly patient died, and thirty-four showed no improvement. The one death was attributed to a cause not directly connected with the surgery.

Trained psychiatrists keep a close check on the paroled patients. The psychiatrists' findings are then submitted to the hospital board for review to determine whether the patient is fit for complete discharge.

Dr. Kessler, surgeon at the hospital, said that ten other patients are now allowed short visits outside the hospital and fifty-seven patients had shown improvement of varying degree.

The patients on which surgery was performed had been in mental hospitals for an average of eight years. One of the discharges had been a mental patient for twenty-six years.

Yale Medical School to Have Largest Freshman Class

In support of the policy of the Association of American Medical Colleges to train more medical students, Yale University School of Medicine will increase its first year admissions from 65 to 80 next fall. This will be the largest freshman class in the history of the medical school.

Music While You Browse

The value of suitable background music as a therapeutic measure has been recorded in the literature. Now it is interesting to note that one of the largest medical book companies in the country provides an unobtrusive musical background as physicians browse through their complete stock of medical and scientific books. This is but one of the features of the new, scientifically-lighted, air conditioned building of the Chicago Medical Book Company in the heart of the Chicago medical center.

Grant to Illinois College of Medicine

Bristol Laboratories, Syracuse, N. Y., has awarded a research grant in the amount of $7,000 to the University of Illinois College of Medicine.

The funds will be used for fellowship stipends in the Department of Pharmacology under the supervision of Dr. C. C. Pfeiffer.

a new type antihistaminic

'PERAZIL' BRAND

CHLORCYCLIZINE HYDROCHLORIDE

℞ on prescription only

New because its distinctive chemical component is a piperazine ring instead of the ethylenediamine group on which most antihistaminic compounds have so far been based: greater specificity of action is the result.

The clinical usefulness of 'Perazil' rests on its well marked and prolonged antihistamine action and the fact that only a few patients experience any side reactions; those who do so usually find them mild.

"The percentage and severity of side reactions was very low. Due to the longer duration of action of 'Perazil', less frequent administration of tablets was necessary".

Cullick, L. and Ogden, H. D.: J. South Med. Assn. 43: No. 7, July 1950

INDICATIONS:	Hay fever, vasomotor rhinitis, urticaria, allergic dermatitis and pollen asthma.
DOSAGE:	50 mg. (one product) once or twice daily with water; may be increased if required in severe cases.
PREPARATION:	'Perazil' brand Chlorcyclizine Hydrochloride 50 mg. Each compressed product is scored to facilitate division.

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Advertisements under the headings listed are published without charge for those physicians whose names appear on the MEDICAL TIMES mailing list of selected general practitioners. To all others the rate is $3.50 per insertion for 30 words or less; additional words 10c each.

WANTED	FOR SALE
Assistants	Books
Physicians	Equipment
Locations	Practices
Equipment	FOR RENT
Books	MISCELLANEOUS

CLASSIFIED ADVERTISING FORMS CLOSE 15th of PRECEDING MONTH. If Box Number is desired all inquiries will be forwarded promptly. Classified Dept., MEDICAL TIMES, 676 Northern Boulevard, Great Neck, L. I., N. Y.

WANTED (Physicians, Assistants, etc.)

M.D. WANTED. General Practitioner to work with small clinic group in Minneapolis. Salary to start, ultimately leading to partnership. Write or phone: Palen Clinic, 4119 E. Lake Street, Minneapolis 6, Minn.

WANTED—LOCUM TENENS: Competent physician, general practice, before July 1. Thriving practice. Community 6500 near Lansing, Michigan. Possibility of partnership or eventual ownership. Percentage basis to start. Well equipped office. Box 6A85, Medical Times.

TRAINED NURSE wanted. Registered within past five years; for doctor's office work and surgical assistant. Box 6A84, Medical Times.

EXCELLENT opportunity for G.P. in northern N.J. very near New York. Box 5A83, Medical Times.

GENERAL PRACTITIONER wanted. Age 35 to 50. Permanent associate or partnership. Large volume demands versatile M.D. Remuneration commensurate to experience and ability. Chicago. Box 5A82, Medical Times.

ESTABLISHED 25 year location in most desirable office building in University City, Mo., for sale. Retiring—small amount of equipment. Box 3A81, Medical Times.

WANTED (Locations)

FOREIGN GRADUATE now serving rotating internship in an approved hospital wants residency in small private hospital in or preferably near N.Y.C. Letters of recommendation available. Reply to Horst E. Wulff, M.D., St. Mary's Hospital, Waterbury, Conn.

PHYSICIAN, age 36, general practice 5 years, veteran last war, family, wants association with busy surgeon or preceptorship. Available near future. Box 3C18, Medical Times.

WANTED (Equipment)

MEDICAL instruments of diagnostic value — not commonly used. Ideas along this line. Box 7B7, Medical Times.

INTERESTED in delivery table. Send description and price to Matthew W. Rossi, M.D., 784 Park Ave., Cranston, Rhode Island.

FOR SALE (Practices)

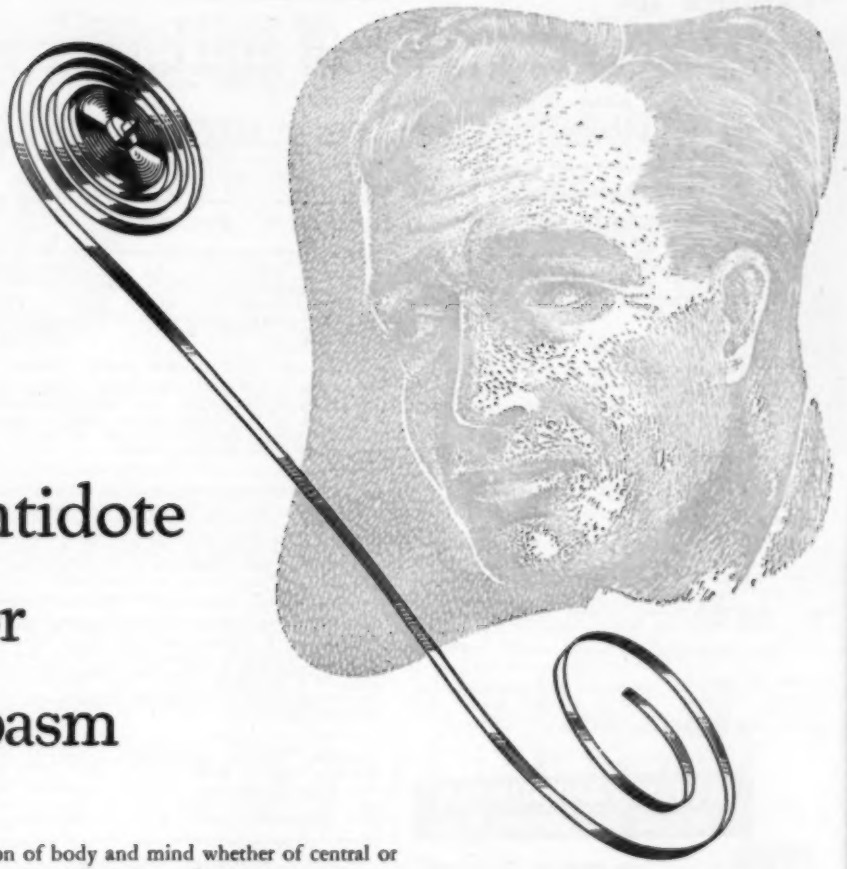
LARGE GENERAL PRACTICE for sale. Fast growing community. For price of 6 room modern office and 4 bedroom, 2½ bath home. So. Calif. Box 6F31, Medical Times.

VERY EASY, lucrative office general practice for sale. Short hours, short week, rare home call, hospital optional, grossed $29,000. Will sell for $5,000 cash. Equipment optional. Ideal for a young man anxious to build up or for older man desiring good income. West Virginia. Box 5F30, Medical Times.

GENERAL PRACTICE in Northern Ohio city of 20,000. Will sacrifice for reasonable price for furniture, equipment, drugs and supplies. No x-ray nor real estate. Practice established twenty years, gross $20,000.00 annually. Going to Florida. Box 4F29, Medical Times.

LUCRATIVE practice and home for sale. North West Chicago suburb. Reasonable. Box 2F28, Medical Times.

—Continued on page 80a



antidote for spasm

Tension of body and mind whether of central or autonomic origin finds a safe, pleasant antidote in Barbidonna. This logical combination of the natural belladonna alkaloids and phenobarbital affords the smooth spasmolysis . . . the balanced sedation . . . so essential for rapid control of smooth muscle spasm in the gastro-intestinal, cardiovascular, respiratory or urogenital tracts and psycho-tension of the central nervous system. Write today for further information and a professional sample.

Formula: Each tablet or fluidram (4 cc.) of elixir contains:

Phenobarbital	16.0 mg. (¼ gr.)
Belladonna Alkaloids	0.134 mg.

(approximately equivalent to ½ gr. belladonna leaves or 7 min. Tr. belladonna)

Tablets: in bottles of 100, 500 and 1000

Elixir: in bottles of 1 pint and 1 gallon

BARBIDONNA

VANPELT & BROWN, INC. *Pharmaceutical Chemists* **RICHMOND, VIRGINIA**

CLASSIFIED ADS

—Concluded from page 78a

LUCRATIVE general practice in Boston suburb with combined office-home for sale. Leaving to enter Service. Box 1F27, Medical Times.

FOR SALE (Equipment)

FISCHER portable x-ray, model S—complete and diathermy (cabinet). At your own price. Also metal examining table. Box 6G67, Medical Times.

X-RAY, EKG, basal and accessories for sale. Box 6G13, Medical Times.

ELECTROCARDIOGRAPH, portable, like new, for sale—$175.00. Box 6G68, Medical Times.

LARGE HANOVIA ultra-violet lamp. Garfield S.W., Pelton sterilizer 14x5", McCaskey desk. New Jersey. Box 5G66, Medical Times.

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